SYNTHESIS OF CULTURAL HERITAGE AND SUSTAINABILITY ON THE EXAMPLE OF TSKALTUBO BALNEOLOGY RESORT

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Abstract: In the modern world, implementing "green" principles in various industries for sustainable development represents a global tendency. In Georgia, the tourism sector grows every year; therefore, it is a priority to make an effective use of its full potential, supported by sustainability and global challenges. One of the big parts of the above-mentioned topic is the sustainable operating of heritage.

The purpose of our work is to present, using the example of the Tskaltubo balneological resort and bath #8 in Georgia, the importance of renovation, adaptation, and integration sustainability principles on the historical and cultural heritages (buildings and complexes which lost their function) for tourism development, circular economy and creating sustainable environment, especially when the built environment generates 40% of the annual global CO_2 emissions.

The rapidly increasing rate of medical tourism made it actual to renew and re-think the concept of balneological resorts (which are out of function in Georgia)

As a result of our research there are some essential requirements for the project methodology:

- Preservation of historical and cultural value;
- Restoration of the primary function of the building;
- Integration of additional functions;
- Integration of sustainable architecture – having as a result the decrease of the footprint on the environment;
- Having logical link to the environment.

Keywords: Georgia, Tskaltubo, sustainable development, heritage, tourism, economy, resort.

INTRODUCTION

In the modern period, in order to promote sustainable development, the global trend is to introduce complex "green" principles in various sectors of the economy. In Georgia, an important branch of the economy, such as tourism, is being actively developed with sustainable principles. The share of the tourism sector is increasing every year; therefore, it is a priority to fully utilize the potential based on sustainability and modern challenges. One of the important links of the mentioned topic is the sustainable management of heritage. The aim of the research in our paper is to demonstrate the importance of the renovation of a heritage with historical and cultural value (an architectural monument, a complex that does not function anymore) and the integration of sustainable principles in the creation of tourism, a circular economy and a sustainable environment, using the example of the Tskaltubo balneological resort and the existing bath #8 there, while keeping in mind that 40% of the annual rate of CO_2 emissions comes from the building stock.

The globally growing pace and interest in medical tourism has made it urgent to renew, modernize and increase the energy efficiency of balneo-resorts in the country.

The town-resort Tskaltubo is the administrative centre of the self-governing unit - Tskaltubo municipality, located in the central part of the historical part of Imereti. The Tskaltubo Municipality is located in the

eastern part of the Kolkheti plain, in the valley of the Rion and Gubisskali rivers. It borders the city of Kutaisi to the east, the municipalities of Samtredia and Khoni to the west, Tsageri and Ambrolauri to the north, and Baghdadi and Van to the south. The territory of the municipality covers 700.1 km^2. The main river is Rion with its tributaries: Tskaltubostskal and Gubistskal. Tavshava Lake is located on the territory of the municipality. In the city of Tskaltubo, there is an artificially created "cold lake". Tskaltubo is located at the junction of subtropical and mid-latitude climatic zones. The climate is mainly subtropical.[1]

The average annual temperature is 14.60 ˚C. The same indicator is 5.30 ˚C in the coldest month (January), and 23.80 ˚C in the warmest month (August). The frequency of the precipitations is due to the proximity of the Black Sea and the mountainous terrain. The average annual amount of precipitation is 1818 mm.

The main transport hub of the municipality is the city of Tskaltubo, which is connected by roads to the cities of Kutaisi, Khon, Tsager, and Tkibuli. The city is connected to Kutaisi also by a railway line. Air transport services are provided through the Kopitnar airport, which is located 25 kilometres from Tskaltubo, which makes it one of the most strategic destinations for tourists.

Tskaltubo is 237 km from Tbilisi, 150 km from Batumi, 101 km from Zugdidi, 7 km from Kutaisi.

The resort has both passenger and freight railway stations.

Passenger flights to the capital and other cities depart from Tskaltubo bus station every day.

The structure of the city street network is based on a circular-radial arrangement. The first circle includes healing springs and separates the park area. It is surrounded by resort objects with corresponding territories.[2]

Competitors of Tskaltubo as a balneological resort in Georgia will be resorts of local importance: Tsaishi-menji, Kobuleti-Ureki at the seaside, and mountain climatic resorts - Borjomi, Sairme Usira, Shovi. If we take into account the strategic location of Tskaltubo, the transport scheme, the improvement potential of the area, the existing fund of sanatoriums and the specificity of the water, it can be said that it is an advanced resort. Tskaltubo is considered to be the main competitor of western European resorts. Czech resort - Karlovy Vary, one of the oldest resorts in Europe, Teplice. The world's first radon sanatorium resort Yakhimov. Hungary, which it is known as the country of thermal baths. Poland - Swinoujście, Kamen Homerski, Kolobrzeg, are located on the coast of the Baltic Sea. Baden-Baden and Wiesbaden in Germany, Vichy - in France, Bath - Great Britain, Spa - in Belgium.

Tskaltubo water is mainly produced as a result of hydrometeorological events. It is based on hot water, which mixes with three times more cold water of karst origin when it invades from a great depth, then it is enriched with radium decay products, which is known as radon. The result is a thermal, nitrogen carbon dioxide, radon mineral water with a unique composition. It has no toxic effects, does not cause immediate changes in the human body, does not cause any side effects, thus it differs from other carbonated and hydrogen sulphide waters. Despite its low mineralization, the Tskaltubo water represents the result of a rare phenomenon. The chemical composition of all Tskaltubo springs is almost the same; it does not change at different times of the year and does not depend on atmospheric precipitation. The temperature constancy is an indicator of the high quality of this water, and its debit is considered a great advantage of the springs. Such an abundance of mineral water, which is useful for treatment without heating-cooling, is not to be found anywhere else in Europe.

Using Tskaltubo mineral waters improves blood composition. Metabolism is strengthened; proteins, fat and carbohydrate burning products also increase. Hot tub baths lower the skin temperature and increase its elasticity.

In case of damage to the peripheral nervous system, the mineral waters of Tskaltubo contribute to the rapid termination of the inflammatory process and the intensive development of regenerative processes.

Currently, Tskaltubo is recognized as a classic resort for the treatment of rheumatism. Various diseases caused by rheumatism have been treated here since time immemorial. During World War II, water tub

[1] Alfenidze 2018.
[2] Alfenidze 2018.

baths were widely used for the treatment of a number of diseases (for the effective treatment of ulcers, open wounds, chronic osteomolitis and other types of injuries). Within the scope of the research conducted in Tskaltubo park and its surroundings, further challenges were identified: faulty infrastructure; low level of service; Master plan.

The resource and existing heritage of the Tskaltubo Park area in the form of a building fund is unused. Out of nine balneological baths, only two are functioning (which still do not fully meet modern standards and cannot provide a service according to demand), while Tskaltubo is considered the main balneological centre of the country. This fact makes the mentioned resort unprofitable both at an international and local level. From the point of view of accessibility, the territory of Tskaltubo Park is not adapted for people with disabilities. There are no tactile paths, sound signals, etc., most of the old sanatoriums are no longer functioning and the population displaced from the occupied territories is sheltered there. As for the hotel, there are no 5-star hotels in the surroundings of Tskaltubo Park. About 20 hotels are operating, including one 4-star and several 3-star hotels. Among the existing hotels, Tskaltubo Spa Resort, Tskaltubo Plaza and Prometheus meet relatively modern standards.[3]

The service quality of balneological procedures is not good. On the one hand, this situation is caused by the failure of existing infrastructure and the lack of qualified personnel. The medical service is episodic and not organized. The same is the picture of the evaluation of food establishments and hotels. After the existing Soviet master plan, which at that time was quite well developed, such nuances were changed that broke the unity of the concept, for example, the system of three concentric roads. The city is constantly changing, therefore the master plan, as a document, cannot be one and the same. The load has increased, the standards have changed, that is why the Tskaltubo master plan is in the development stage.

The project territory of our research is located in the western part of the Tskaltubo Park, the territory of the existing 8th bath, which was built in 1959, based on the project of architect Ioseb Zaalishvili and constructors D. Kajaia and N. Meskhi. For the first time in Georgia, the dome-type reinforced concrete roofing of the building was carried out (the roof weighing 42 tons). It has four sectors with 28 individual cabins each. The throughput was 134 people per hour.

Nowadays, the said building remains non-functional; the whole structure is damaged due to its age, in fact only the frame remaining. Despite this condition, the building is so characteristic with its volume and architectural solutions that it does not leave any visitor indifferent. Even in the surviving frame, the Soviet heritage is very clearly visible. Brutal massive concrete forms, which, like other similar buildings, were a demonstration of Soviet power.

The concept of our project, which we have established, involves the reconstruction and adaptation of bath #8 in Tskaltubo, restoring the old function and giving it a new life. The globally growing pace and interest in medical tourism has made it urgent to update, modernize and standardize existing balneo-resorts in the country.

Within the framework of the project, it is planned to assign a multifunctional purpose to the project building. In addition to the balneological procedure services that will be planned according to international standards, the building will accommodate also a gallery for recreational purposes.

The essential requirements of the project are: preservation of historical value; restoration of the original function; integration of additional functions; integration of sustainable architecture; creation of a logical functional chain with the environment; within the framework of the reconstruction of the bath, we got a functionally better planning, even though it was in operation. In particular, before the procedure, there is a preparation area with showers and changing rooms. As it was found out from the previous project study, two of the four entrances to the building were intended for men and two for women. As a result, the space consists of 4 zones, and each zone has two 14-seat baths. After the procedures, there is a rest area, where a showroom of self-care products is provided, which will create an additional economic stimulus. The volume additionally accommodates the function of an outdoor swimming pool, which turns into a skating rink in winter. A gallery space will be arranged around it.[4]

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3 Kobalia 2020.

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Thus, based on our research, in the project area thus, based on our research, sustainable solutions were adopted in the project area, such as: heating and cooling, heat pump for receiving geothermal energy, photovoltaic shingle on the roof for receiving electricity, mina block on the facade with photovoltaic plate for receiving electricity. With the existing water resources, a sustainable method of obtaining energy has been developed. In particular, the bath is supplied with water of a constant temperature of 39˚C, the procedure using the temperature of the exposed water, the temperature being taken from the water through the heat exchanger. As a result, thermal energy will be generated, which will be used by the staff to heat the water.

Two buildings were designed near the bath, one a catering facility and the other a meditation centre, offering services for both mental and physical health. Based on the research and architectural project, it becomes clear how important it is to obtain sustainable economic benefits from the reconstruction, rehabilitation and sustainable management of a building with cultural and historical value

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