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Monuments of The Czech Republic On The UNESCO World Heritage Site List and Their Significance for Geotourism

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Abstract

The article presents the monuments from the Czech Republic enlisted on the UNESCO World Heritage Site List. Each country tries to choose representative sites and monuments that document the structural and architectural development in a given region. Therefore, the Czech Republic carried out an analysis of their monuments. As the Czech Republic has a very rich and expressive history in the very centre of Europe, its history has significantly affected its civil engineering and architecture. It is also a country with a varied geological structure and geomorphology. Today's untraditional forms of tourism, among which we also find geotourism, may thus build on such knowledge and expand the current offer of destinations. Learning about the geological structure is also important in terms of future renovation and reconstruction work. The current list of UNESCO cultural sites will be expanded by further unique sites and buildings. For this reason, it is important to combine knowledge from more specialised disciplines, such as geology and mining science.

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1. Introduction

UNESCO is an organisation that, inter alia, strives to protect the cultural monuments and sites world-wide. This issue has been globally paid all lot of attention in many scientific works [5, 8, 9, 10, 14, 16, 26, 27, 28]. Currently, the UNESCO World Heritage Site List includes more than 1000 items of a cultural, natural and mixed character. These monuments and sites are found in over 160 countries. About 800 of the monuments are of the cultural heritage character. Even if the the Convention concerning the Protection of World Cultural and Natural Heritage was signed in 1972, the former Czechoslovakia joined it towards the end of 1990 and it became binding in February 1991. The main task of the convention is the duty of each member country to ensure the maximum protection, conservation and presentation of the cultural and natural heritage to and for next generations.

At present, the Czech Republic has 12 items of tangible cultural heritage and 4 of intangible cultural heritage on

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the list. The preserved monuments are buildings of different characters and purposes. They were also built in different architectural styles in towns with a long history, e.g. Prague. Apart from the individual monuments, attention is also paid to groups of buildings. Such monuments create interesting sceneries and may thus be used for diverse purposes. They are interesting not only from the tourism point of view, but they are useful in the film industry too. In the past, there were more such groups, but not all of them have been preserved. For the last century, the landscape has been subject to many changes. The country experienced many establishments and economic systems. There were wars, the extraction of mineral resources was boosted, industry boomed and there were other factors too. In the most affected areas only torsos of formerly rich built-up areas have remained. Even nowadays we witness the fact that many monuments perish due to insufficient protection or neglected maintenance on the part of their owners. Due to the circumvention of the law, the state loses valuable buildings throughout the republic and thus each effort to reverse this course is important in the general protection.

2. The geological structure of the Czech Republic and its monuments

Unfortunately, we are witnessing the fact that many monumental works perish or are being damaged mainly because of military and religious conflicts. Widely, the issue of monuments and sites protected by UNESCO is discussed in many works, for example by [1, 3, 4, 11, 18, 21, 22, 29]. Another fundamental problem, both world-wide and in the Czech Republic, is the geological structure of a given locality, where the specific monuments are located. The Czech Republic has a very varied geological structure. Two large geological units meet there. In the west it is the Bohemian Massif and in the east it is the Western Carpathians. In some localities the geological structure is very complicated and unsuitable for construction without any preparatory measures.

The list includes single monuments as well as groups of buildings. These date back to different eras and were built applying different building methods and materials. The current and future reconstruction work must count with many factors, which were often neglected in the past and thus had a negative impact on their overall conditions. The geological structure is one of the most important factors and neglecting this factor during construction or later works in the vicinity may lead to serious static disturbances in the monuments.

This article describes the basic bedrock geology of selected monuments and groups of buildings. A detailed description of the overlying formations is also very important. The overlying formations formed by natural geological activities as well as there are anthropogenic deposits. As the data are being retrieved gradually, for example during more extensive reconstruction works in the localities (Villa Tugendhat), their list is not complete yet. In fact, such a detailed description contains a lot of information from different research projects and measurements. Therefore, the article works only with selected monuments. Combining the knowledge on the geological structure and history of important premises may significantly expand the less traditional forms of tourism, among which geotourism has recently developed [6, 12, 13, 15, 19, 20, 23, 24].

3. Overview of listed monuments and groups of buildings

The UNESCO World Heritage List gradually incorporates different monuments of a global significance. The scientific works, such as [2, 7, 25], greatly contribute to their promotion worldwide. To date, the Czech Republic has the following 12 monuments or groups of buildings on the list:

Český Krumlov was the first on the list. Listed was the historical centre of the town with over 300 buildings dating back into Gothic and Renaissance. The overall scenery is topped by the Vltava River that meanders at this part of the course. On the inner part of one of the meanders there is a protected 'jewel' of South Bohemia, i.e. the preserved specimen of the building development and urbanisation structure from the 13th to 19th centuries. The dominants are the castle and chateau. With its area of 6 ha, it is the second largest castle complex in the Czech Republic, after Prague Castle. The main construction works took place from the 14th to 19th centuries. The dominant style is Renaissance with later Baroque reconstruction. The chateau garden spreading on 11 hectares is of the Baroque style. It is kept in the style of French and English landscaping with a cascade fountain and a lake. The Baroque theatre from the 18th century, with its unique equipment and furniture, is one of best preserved theatres in Europe. Other noted monuments are the Gothic Cathedral of St. Vitus, Jesuit school and many other interesting buildings.

In 1992 Prague came second to be listed on the UNESCO list. Visitors may admire its long and rich history recorded in the different buildings. All-important architectural styles documenting the city history are represented there, including diverse materials used in the different periods. Romanesque style mainly used cretaceous marl as the building material, the Gothic used it for decorations, and apart other materials, there are also semiprecious stones. Interesting and valuable buildings are also more recent ones from the period of Art Nouveau, Cubism, Constructivism or Functionalism. It was the historical centre of the city that was enlisted. This locality is rightly classified among the most important architectural reserves in the country. This complex includes many buildings on an area of 866 hectares. The buildings are found in different groups of buildings or quarters, such as Hradčany, Malá Strana, Old Town, Josefov, New Town and Vyšehrad. Among the most popular are the Prague Castle with its St. Vitus Cathedral, Charles Bridge and the premises of the Jewish Town. The most dominant monument, and also the dominant of the Prague Castle, is the St. Vitus Cathedral. Its construction lasted from 1344 to 1929. For this reason, a part of the structure is Gothic and the later extensions are Neo-Gothic. It is the most important Catholic church in the Czech Republic.

Telč with its historical town centre is a perfect example of Gothic-Renaissance urbanistic complex. This is a result of profound reconstruction from the 16th century. The historical core includes a large Renaissance chateau complex with its gardens and English-style park. The chateau was originally a Gothic castle. Thanks to Zacharias of Hradec the reconstruction was done in the style of Italian Renaissance. Out of many other monuments, there is an undisturbed complex of Gothic and Renaissance burgher houses on the Square of Zacharias of Hradec, Church of St James and Jesuit College. The conservation measures, which have been underway for several years, also emphasize the external sgraffito and other decorations on the buildings. Interesting are also smaller structures, such as the St Mary Column from 1716 – 1718.

Žďár nad Sázavou with its pilgrimage Church of St John of Nepomuk on Zelená hora was enlisted in 1994. It is one of the best and most original projects of the famous Baroque architect Jan Blažej Santini Aichel (1677 – 1723) from the beginning of the 18th century. The building is in the Baroque Gothic style. The church is a central building surrounded by an ambit. The symbol of number 5 is highly prominent there, for example in the pentagram layout of the complex, number of entries or apses.

Kutná Hora and its historical centre, the Cathedral of St Barbora and Cathedral of the Assumption of the Virgin Mary in Sedlec joined the list in 1995. Kutná Hora is one of the biggest medieval Czech towns and owes its development and riches to mining. The symbolism of mining may be found in the names of buildings and in their decorations. The landmarks are especially the Late Gothic Cathedral of St Barbora, the Cathedral of the Assumption of the Virgin Mary in Sedlec, the Church of St James, Jesuit College, Monastery of St Voršila Order, Vlašský dvůr (Italian Court), and Kamenný dům (Stone House). The Cathedral of St Barbora is a five-nave Gothic cathedral. Its construction began in 1388 and was finished in 1558. It was founded by Jan Parlář, and his work was taken over by Matěj Rejsek. A sixty-year break in the construction was caused by Hussite unrest. Sandstone from the nearby quarries was used for the construction.

Lednice-Valtice Complex is considered the most extensive (283 km²) cultural-natural landscape in Europe. This artificially made landscape and architectural piece of work was shaped by the family of Lichtenstein for centuries. The landmarks are the Valtice Chateau, built by means of reconstructing the original castle, and the Lednice Chateau, on whose place there used be a Gothic fortress. Both the chateaus were subject to Renaissance and Baroque reconstructions. The current look of the Lednice Chateau was also topped by Neo-Gothic reconstruction (Tudor Gothic) from the mid-19th century. The complex also includes many minor buildings, such as the Lovecký zámeček (Hunting Lodge), Rybníční zámeček (Pond House), Janův hrad (John's Castle), Hraniční zámeček (Border House), Chrám Tří Grácií (Temple of Three Graces), Apollonův charm (Temple of Apollo), Minaret, Greenhouse, Obelisk and Rendez-vous.

In 1997 Kroměříž was pronounced the most beautiful historical town in the country. In 1998 its unique monuments, i.e. Archbishop's Chateau and its adjoining gardens, joined the UNESCO World Heritage List. Apart from the two gardens, the architectural landmark is the Archbishop's Chateau. Originally, it was a Gothic castle that underwent a fundamental reconstruction at the start of the 16th century. This turned it into a Renaissance chateau and a seat of Olomouc bishops. It gained its Baroque style around the mid-17th century.

Holašovice is a small village near České Budějovice and it has an interesting architecture of rural buildings. The village is a locality with the best preserved architecture in the style of rural Baroque. This architectural style asserted itself mainly in South Bohemia. The village is characteristic for the almost preserved layout of a medieval village with its houses from the 18th and 19th centuries. The whole complex counts 23 farms with 120 buildings. The farms are situated around a rectangle village green and are inhabited. The houses have interesting gable fronts with preserved stucco decorations.

Tab. 1: Dominant architectural styles of selected monuments and their bedrock geology.

Number –Year of listing	Locality	Type of monument	Dominant architectural style	Bedrock geology
1 - 1992	Český Krumlov	castle and chateau	Renaissance, Baroque	Moldanubicum (orthogneiss, granulites, crystalline limestone)
2 - 1992	Praha	Cathedral of Saint Vitus	Gothic, Gothic Revival	Barrandien (sediments of earlier Paleozoic)
3 - 1992	Telč	chateau	Renaissance	Moldanubicum (migmatites, gneisses)
4 - 1994	Žďár nad Sázavou	pilgrimage church	Baroque Gothic	Moldanubicum (paragneisses, migmatites)
5 - 1995	Kutná Hora	Cathedral of Saint Barbara	Late Gothic	Kutná Hora Crystallinicum (gneisses, mica schists) + Mesozoic
6 - 1996	Lednice – Val-tice	Lednice Chateau	Gothic Revival	Vienna Basin (clastic sediments)
7 - 1998	Kroměříž	Archbishop's chateau	Early Baroque	Brunovistulicum (granitoides) + Neogene-Quaternary
8 - 1998	Holašovice	rural buildings	Baroque (rural)	Moldanubicum (granulites)
9 - 1999	Litomyšl	chateau	Renaissance	Bohemian Cretaceous Basin (calcareous clastic sediments)
10 - 2000	Olomouc	Holy Trinity Column	Baroque	Drahany Culm (clastic sediments)
11 - 2001	Brno	Villa Tugendhat	Modern architecture, Functionalism	Carpathian Foredeep (Clastic sediments)
12 - 2003	Třebíč	basilica	Romanesque-Gothic	Moldanubicum – Pluton (granites, syenites)

Litomyšl has a landmark in the form of its chateau, which was enlisted in 1999. It is an arcade Renaissance chateau in the Italian style from the second half of the 16th century. The reconstruction followed the plans of a renowned Renaissance architect, Giovanni Battista Aostalli. The chateau has a square ground plan, two floors and with basement in places. There are pronounced arcades and sgraffito. In the chateau premises there are also other preserved buildings, such as the chateau brewery and the riding school. The finishing touch is given by the chateau garden.

Olomouc has been known for its monuments in the historical town centre. One of them, the Holy Trinity Column, was enlisted on the UNESCO World Heritage List in 2000. This 35-metre tall landmark of the city was built by the artists and craftsmen of the town between 1716 and 1754. On several floors there is the largest set of Baroque statues within one sculpture, which is a Central-European original work. The bottom part of the column includes a chapel.

Brno has been enlisted thanks to the Villa Tugendhat. This Functionalistic building by the architect Ludwig Mies van der Rohe was built between 1929 and 1930 for the Tugendhat Family. It is situated in the Brno quarter called

Černá Pole. It is the only modern architecture building in the Czech Republic listed on this UNESCO list. Recently, the interior, exterior and the garden underwent a complete renovation and restoration in the original sense.

Třebíč is enlisted thanks to its Jewish Quarter and the Basilica of St Prokop. The densely built-up Jewish Quarter is a remnant of several-century co-existence of Jews and Christians. There are 123 houses, two synagogues and a Jewish cemetery. The Basilica of St Prokop was originally dedicated to Virgin Mary. As almost derelict it was used for secular purposes for almost two centuries. Having been renovated and dedicated to St Prokop, it is again used by the Church.

4. Conclusion

The architectural monuments in the Czech Republic listed on the UNESCO World Heritage List were built on different geological bedrocks (see Tab. 1). The dominant geological unit, on which the highest number of the stated monuments are situated, is Moldanubicum. Petrographically, the unit is made up by predominant metamorphic rocks. During centuries, many interesting buildings have been built on the unit, out of which several more are likely to get on the list too. Out of the current list, there are five sites on Moldanubicum (Český Krumlov, Telč, Žďár nad Sázavou, Holašovice, and Třebíč). The dominant architectural styles are Baroque and Renaissance. The remaining seven localities have varied geological bedrocks that belong to different geological units. The bedrocks there are made up by magmatic, sedimentary and metamorphic rocks. The dominant rocks are clastic sedimentary rocks. Out of the architectural styles there are practically all of them, especially thanks to Prague. Still, the dominant styles in the listed buildings is Gothic, Baroque and Renaissance. We may also admire interesting buildings and extensions in the Neo-Gothic style. Prague is dominant as for the variety of the architectural styles. The construction works started in the 10th century and have left a number of architectural jewels, such as the Prague Castle and the Cathedral of St Vítus. In the course of the centuries, many Romanesque and Gothic churches, Baroque palaces and gardens, Art Nouveau and Cubist buildings, houses and other, also modern, buildings, were built there that all form a unique architectural whole. Therefore, it is ranked among the most beautiful historical cities in the world. This is reflected in its popularity with national and foreign tourists and Prague has the prime position as for Czech tourism being the most visited city in the Czech Republic. Still, in the Czech Republic there are many other interesting buildings that may become candidates for the UNESCO World Heritage List, such as churches on the undermined area of the Ostrava-Karviná Coal District. The research results appear in works by [17, 30]. In the future, the studied area may become a suitable locality for geoscience and mining tourism.

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