

## Impact of geopark establishment on regional tourism development; case study from Slovak part of the Novohrad-Nógrád Geopark

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### ABSTRACT

In last decades, several new and “non-traditional” forms of tourism has been developed as a result of specific needs of particular groups of tourists. Geotourism offers via geoparks several opportunities of regional tourism development. The aim of this study is focused on two major points: 1 – to introduce geotourism as an innovative approach within the tourism and 2 – based on the case study from the area of Slovak park of the Novohrad-Nógrád Geopark, to point out how geopark can positively affect regional tourism development as underpinned by the case study results and conclusions presented in this paper.

**Key words:** geopark, tourism, innovation, sustainable development

### INTRODUCTION

As still much more people look for new, non-traditional and/or innovative forms/approaches within different areas of human activities, new forms of tourism reflecting the demand of particular groups of people has been defined also.

From ancient times, people tend to visit attractive and impressive natural places including e. g. caves, mountains, canyons, volcanoes, etc. But just in last decades, a real challenge has emerged in the tourism sector by creating completely new market with very specific and unusual requirements arising from researcher’s definitions, needs of nature heritage preservation, appropriate way of tourists’ education and tourists’ demands. “Nature-friendly” or “geo-friendly” approach of many professionals and laics within different branches of science assisted and helped to definition of specific form of tourism – geotourism.

This article, based on case study data from the Slovak part of the Novohrad-Nograd Geopark, is devoted to the introduction and characterization of geotourism and geoparks as relatively innovative approach within tourism respecting principles of sustainable development and to study of their impact on regional tourism development.

### GEOTOURISM AND GEOPARKS

As e.g. popularity of eco-foods significantly grows in last years, geotourism and geoparks, with their non-traditional Earth-resources tourism offer, become popular in the world nowadays. There are several different ways of geotourism understandings. First real definition of geotourism comes from Hose (1995). He defines geotourism as “the provision of interpretive and service facilities to enable tourists to acquire knowledge and understanding of the geology and geomorphology of a site

(including its contribution to the development of the Earth sciences) beyond the level of mere aesthetic appreciation". This definition was subsequently modified by many authors (e. g. Hose, 1996, 2000; Joyce, 2006; Dowling & Newsome, 2006; Sadry, 2009). Nowadays, well-accepted definition was published by Newsome and Dowling (2010), which says that geotourism is "A form of natural area tourism that specifically focuses on landscape and geology. It promotes tourism to geosites and the conservation of geo-diversity and an understanding of Earth sciences through appreciation and learning. This is achieved through independent visits to geological features, use of geo-trails and viewpoints, guided tours, geo-activities and patronage of geosite visitor centers". From wider aspects, geotourism is a special form of tourism which is based on learning about geological objects and processes (geosites) with special emphasis on their aesthetical and historical value, and exploring technical monuments connected to mining activity (abandoned mines and/or quarries, mining museums, trade routes of goods of mining origin) and technical and historical monuments connected to mining history (Rybár, et al., 2010). An alternative view on geotourism is given by National Geographic (2014). They define geotourism as "tourism that sustains or enhances the geographical character of a place - its environment, culture, aesthetics, heritage and the well-being of its residents".

In general, it can be assumed that geotourism covers a variety of aspects (educational, scientific, environmental, social, cultural, economic, promotional, technical, service), on which the development of geotourism depends (Słomka & Mayer, 2011). After the year 2000, establishment of geoparks and definition of the European Geoparks Network (EGN) and Global Geoparks

Network (GGN) accelerated geotourism development worldwide.

According to recent UNESCO definition, geopark can be characterized as follows: "A Global Geopark is a unified area with geological heritage of international significance. Geoparks use that heritage to promote awareness of key issues facing society in the context of the dynamic planet we all live on. Many Geoparks promote awareness of geological hazards, including volcanoes, earthquakes and tsunamis and many help prepare disaster mitigation strategies among local communities. Geoparks hold records of past climate change and are educators on current climate change as well as adopting a best practice approach to utilizing renewable energy and employing the best standards of 'green tourism'." (UNESCO, 2014)

Every social activity works on the principle of some organization as purposefully created system accomplishing objectives for which it was created. Geopark should fulfill following tasks (Rokovanie vlády SR, 2010):

- care for the local environment and protection of geopark localities (geosites);
- education;
- research and scientific activity, cooperation with scientific institutions;
- region presentation, care for tourists, monitoring and evaluation of tourism services, awareness ensuring (guide, animators);
- cultural and sport activities, workshops;
- local production and development.

The history of geoparks at international level has begun in 1991. In this year, an International Declaration of the Rights of the Memories of the Earth had been adopted. This international initiative had been sign-up by International Union of Geological Sciences (IUGS), International

Geoscience Programme, ProGeo, Malvern Group, UNESCO's Division of Earth Sciences and European Council (Rokovanie vlády SR, 2010).

Multidisciplinary nature of geopark and its role within tourism support clearly differ geoparks from any other models of tourism sustainable development. From this point of view, geoparks with its geotourism offer can be considered as innovation within tourism bringing several benefits (including employment increase, economic benefits, etc.), especially to the region of geopark.

## METHODOLOGY

To testify if geopark and geotourism activities contribute to the development of the area and its prosperity, a comparative study was chosen. Selected indicators including the number of night stays of visitors in accommodation facilities, the number of visitors in accommodation facilities, the number of accommodation facilities were compared before and after the geopark establishment. Visible increase within individual studied indicators will clearly confirm that geotourism activities as relative innovative approach within the tourism influence the tourism development of the geopark area. Also, financial investments were assessed. As the data needed for this study were available only from Slovak part of the geopark, this study discusses impact of geotourism only on this area.

## NOVOHRAD-NÓGRÁD GEOPARK OVERVIEW

Novohrad-Nógrád Geopark as a cross-border (Slovakia-Hungary) includes 28 municipalities in its Slovak part and 63 municipalities in Hungary (Fig. 1). In the area of geopark, two protected areas are

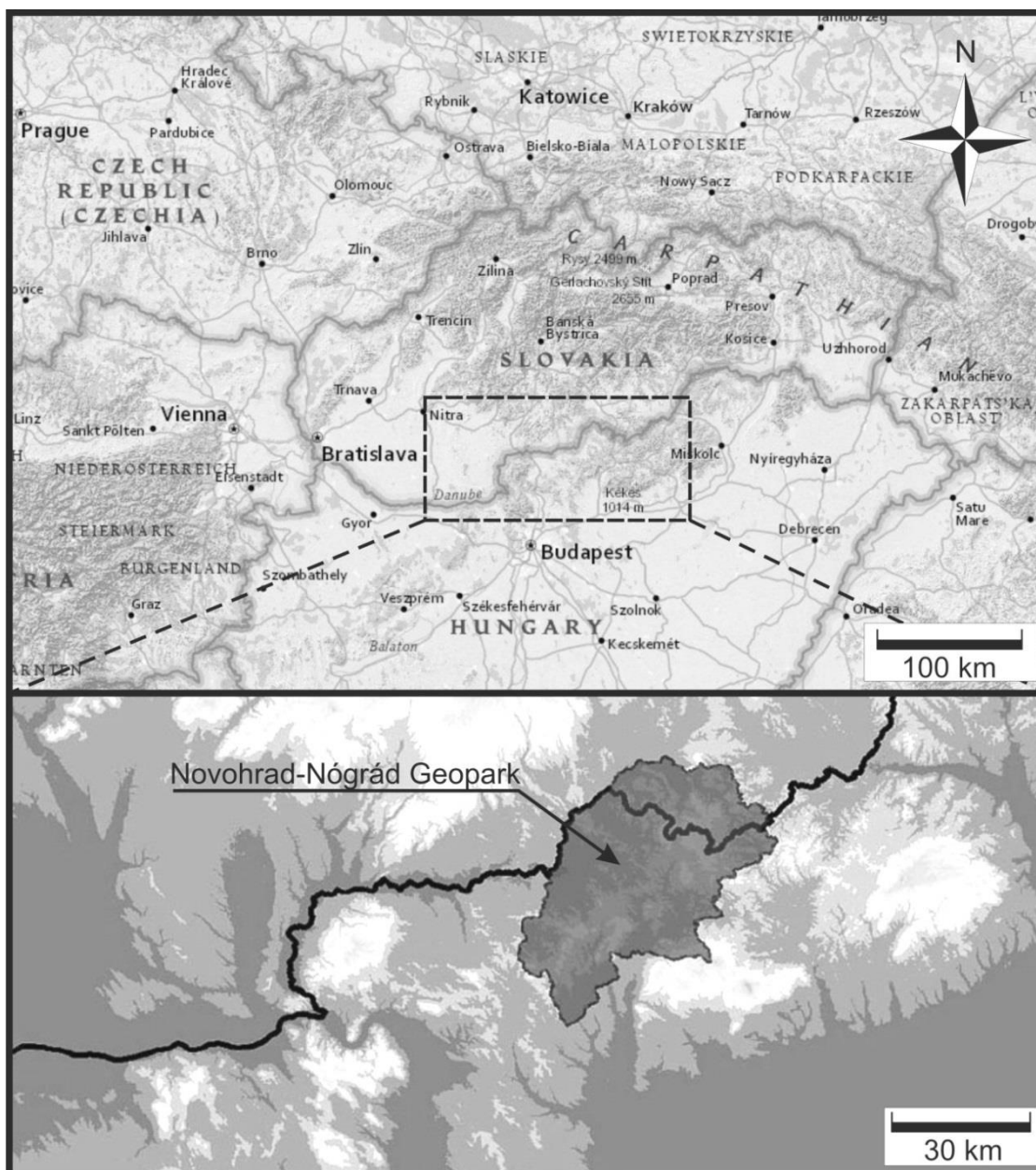
located – Cerová Vrchovina Protected Landscape Area and Karancs Medves Protected Area. Both areas were established to protect and preserve the youngest Neogene volcanics within the region in 1990. Thanks to relative young age of the geological structures they can be used not only for research but for educational and tourism purposes for general public.

The project of the geopark was initiated by the idea plan in 2003. This plan was processed into complex spatial and development study of geopark in the area of both states during 2006 and 2007.

In 2008, the geopark was officially established and its management started to prepare for all the requirements to become a member of European Geoparks Network (EGN) and Global Geoparks Network (GGN). In 2010, Novohrad-Nógrád Geopark became the 37<sup>th</sup> EGN member and 66<sup>th</sup> member of GGN (Geoparky na Slovensku, 2014). General characteristics of the geopark are given in the table 1. As summarized by EGN, “within a relatively small area a wide spectrum of volcanic activity can be investigated. Devastating pumice flows, andesitic stratovolcanoes formed under the sea and on land, long dyke networks, a basalt plateau which is noted amongst the largest uninterrupted examples in Europe, deeply eroded vents of andesite and basalt volcanoes, diatremes and a real speciality, the bundles of regularly shaped, arcuated rock columns derived from the slow cooling of the basalt and andesite lavas.” (European Geoparks Network, 2014)

## DISCUSSION ON THE IMPACT OF GEOPARK ESTABLISHMENT ON REGIONAL TOURISM

One of the best way how to express the impact of geopark establishment on regional tourism development is via the total number of visitors.



**Fig. 1** Location of the Novohrad-Nógrád Geopark (source: arcgis.com, European Geoparks Network, 2014; modified)

As there is no regular and/or official evidence of geopark visitors in the study area, the only way how to assess the impact of the innovation within the tourism offer in the region is to compare the number of visitors and their night stays before and after the geopark establishment.

Despite many publications dealing with geotourism and/or geoparks, there is lack of research devoted to direct impact of geopark establishment and geotourism on regional development. According to Elder and Patzak (2004),

with respect to sustainable development, numerous areas in the world offer immediate potential for substantial economic development because of the presence of a diverse range of geological phenomena including, amongst many others, structures, minerals and fossils. Geological heritage sites, properly managed, can generate employment and new economic activities, especially in regions in need of new or additional sources of income. But their conclusions are not supported by any research numbers.

Härtling and Meier (2010) concluded that it is not possible to prove direct relationship between the geopark and the tourist expenses. They assumed that (geo)tourist spend relatively little money on lodging, but on the other hand notable amount of money on meals and additional services.

Farsani, Coelho and Costa (2012) assumed that a new vision of geotourism and geoparks, through innovation and some strategies, attempt to develop the local economy via direct incomes Data obtained from the Statistical Office of the Slovak Republic and the Slovak Tourist Board give interesting results (Figs. 2 - 4). There is not very visible increase of visitor number and their night stays after the geopark establishment (years 2008, 2009). And, other clearly visible fact is decreasing trend of studied variables in general.

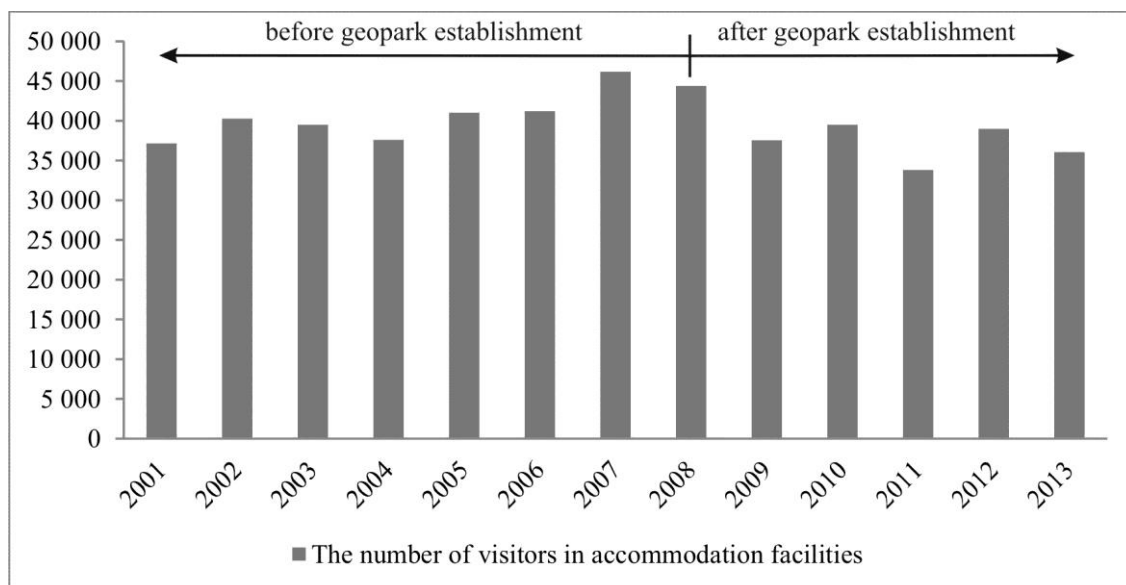
That means that neither such innovation like establishment of geopark does not assure sustainable development and increase of visitor numbers.

On the other hand, to be objective, it is necessary to say here that world financial crisis from 2007-2008 influenced the tourism sector also. Therefore a comparison of ratio of studied variables from geopark area to the whole self-governing region area was made (Figs. 5, 6).

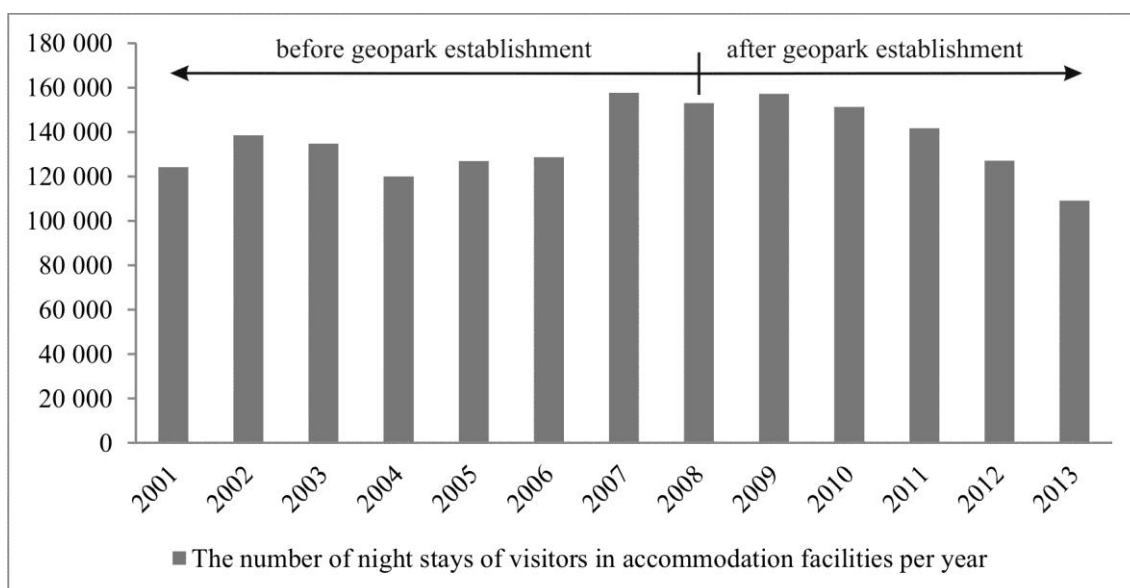
As it can be seen from graphs above (Figs. 2 – 6), it is very hard to find a relationship between geopark establishment and the number of visitors and their night stays in accommodation facilities in the area. The only clear conclusion is, that after geopark establishment several new accommodation facilities were open and in connection with it, local economy was

**Tab. 1** General characteristics of the Novohrad-Nógrád Geopark (source: Geoparky na Slovensku, 2014)

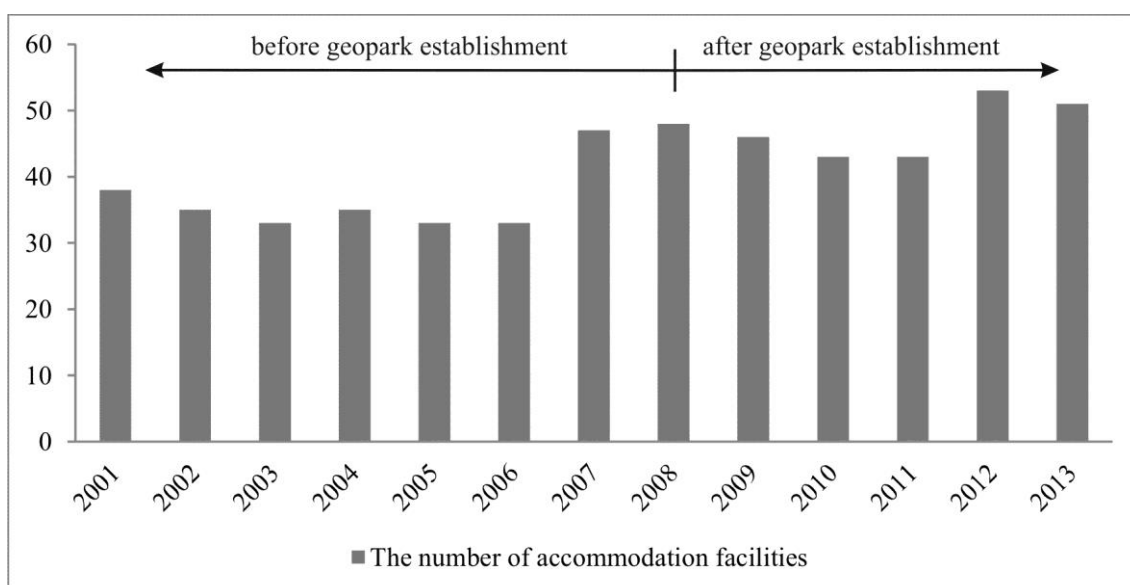
Geopark area	1578 km <sup>2</sup> (336 km <sup>2</sup> in Slovakia and 1251 km <sup>2</sup> in Hungary)
Number of geosites	76 (32 in Slovakia, 44 in Hungary)
Presented topics	geology, nature protection, history, culture
Geological characteristics	Neovolcanics



**Fig. 2** The trend of the number of visitors in accommodation facilities in the Slovak part of the Novohrad-Nógrád Geopark (source: Statistical Office of the Slovak Republic, 2014; own compilation)



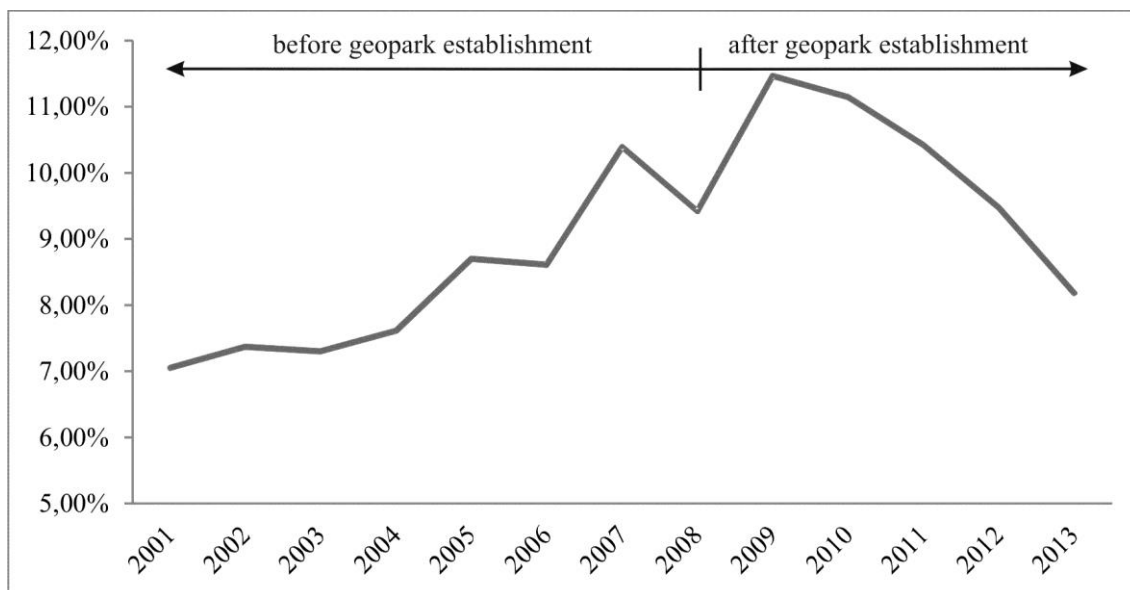
**Fig. 3** The trend of the number of night stays of visitors in accommodation facilities in the Slovak part of the Novohrad-Nógrád Geopark (source: Statistical Office of the Slovak Republic, 2014; own compilation)



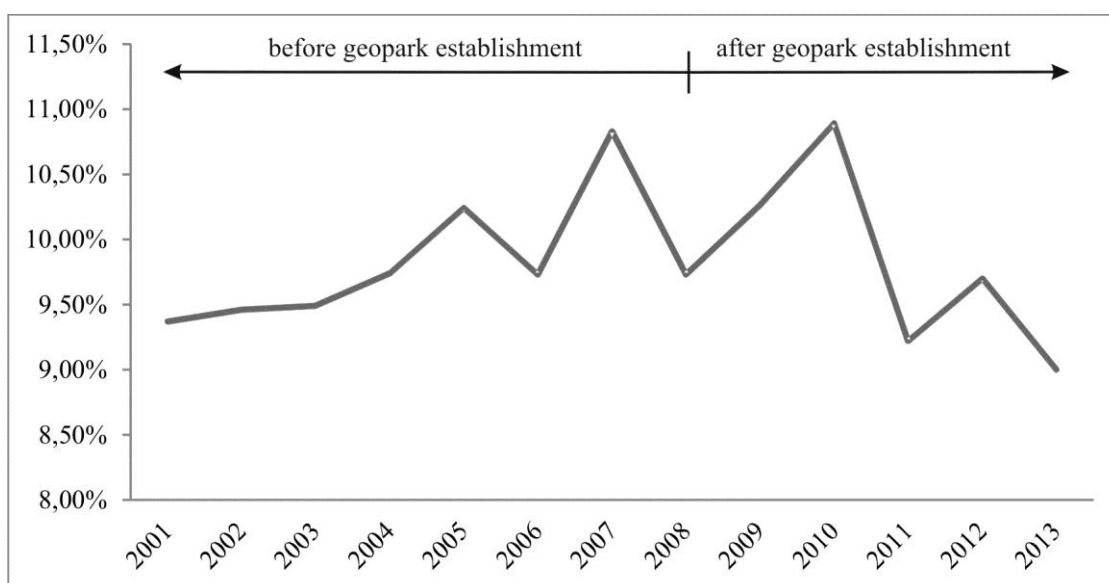
**Fig. 4** The trend of the number of accommodation facilities in the Slovak part of the Novohrad-Nógrád Geopark (source: Statistical Office of the Slovak Republic, 2014; own compilation)

more supported. Because geotourists do not spend a lot of money on accommodation (Härtling and Meier, 2010), or they do not stay in the area of geopark during the night in general, another way how to quantify the impact of geopark establishment on the regional development is to analyze the data from direct financial support connected with the geopark activities. Establishment of

the Novohrad-Nógrád Geopark requires inevitable and continuously coordinated activities aimed on the geopark vision fulfillment, development of the geopark area and management, and constantly improve this practice to reach balanced development throughout the whole area of the geopark. As a result of successful cooperation several projects, devoted to the development on primary and



**Fig. 5** Percentage of the number of visitors' night stays in accommodation facilities in the Slovak part of the Novohrad-Nógrád Geopark within the total number of visitors' night stays in whole area of the Banská Bystrica Self-governing Region (source: Statistical Office of the Slovak Republic, 2014; own compilation)



**Fig. 6** Percentage of the number of visitors' night stays in accommodation facilities in the Slovak part of the Novohrad-Nógrád Geopark within the total number of visitors' night stays in whole area of the Banská Bystrica Self-governing Region (source: Statistical Office of the Slovak Republic, 2014; own compilation)

secondary tourism offer, have been proposed and realized in the area of the geopark, e.g. Palóc Route supported by EU funds by 806 206 €, Development of the Novohrad-Nógrád Geopark infrastructure with budget of 494 984 €, Development of tourism destination of Novohrad-Nógrád Geopark (339 966 €), or the project of Development of tourism products and information system of

Euroregion Neogradiensis and Novohrad-Nógrád Geopark with budget 21 965 € (19 205 € supported by EU funds). In total, more than 3 000 000 € were invested in different activities connected to the geopark (Mesto Filákov, 2014). So, it can be assumed that establishment of the geopark has contributed by plumbless amount of financial support to the regional

development of tourism in general.

## CONCLUSION

Geotourism as relative new form of tourism brings several innovations into the tourism sector. Here, geopark establishments and their active running can be considered as one of the most significant contributions which can positively affect whole area of geopark and its vicinity. Therefore, appropriate attention should be paid on the impact of geoparks and geotourism on regional (tourism) development.

According to the study results presented in this paper, it is not clearly visible that establishment of the Novohrad-Nógrád Geopark has resulted into increase of numbers of visitors using services of accommodation facilities. Taking into account that economic crisis affected the tourism customer behavior, we can assume that on one hand the geopark itself maybe did not resulted into increase of visitor numbers but on the other hand it is necessary to mention that without this type of innovation within tourism offer in the study area the numbers of visitor would be much lower. As these numbers are the only available official statistical data which can be analyzed in such kind of study, it would be useful to develop effective form data collection for further analysis and research as presented in this paper. Also, the study results show that geopark establishment can significantly help to obtain financial support for regional tourism development, so the area of geopark is more competitive in comparison to other regions.

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