## VISUAL POLLUTION IN NATURAL AND LANDSCAPE PROTECTED AREAS: CASE STUDIES FROM POLAND AND SLOVAKIA

Magdalena Szczepańska <sup>6</sup>, Agnieszka Wilkaniec <sup>6</sup>, Lucia Škamlová<sup>3</sup>

<sup>1</sup>Faculty of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Poznań, Poland <sup>2</sup>Department of Landscape Architecture, Faculty of Horticulture and Landscape Architecture, Poznań University of Life Sciences, Poland

<sup>3</sup>Department of Economic and Social Geography, Demography and Territorial Development, Faculty of Natural Sciences, Comenius University, Bratislava, Slovakia

> Manuscript received: July 5, 2019 Revised version: December 22, 2019

Szczepańska M., Wilkaniec A., Škamlová L., 2019. Visual pollution in natural and landscape protected areas: Case studies from Poland and Slovakia. *Quaestiones Geographicae* 38(4), Bogucki Wydawnictwo Naukowe, Poznań, pp. 133–149. 3 tables, 5 figs.

ABSTRACT: The phenomenon of outdoor advertising is particularly worrying in protected areas due to the limitation and depreciation of natural and landscape assets. The paper aims to identify and compare legal provisions concerning the advertising policy in relation to naturally and visually precious areas in Poland and Slovakia. Moreover, it determines the scale of visual pollution in a protected area – trends in the location, size, form and influence on the surroundings and perception. In both analysed countries there are regulations that would not bring the desired effects regarding the advertising policy. Advertisement devices are present in settlements and at significant road points, entrances to facilities connected with tourism. A point of concern is that they are frequently placed in the most precious landscape areas.

KEY WORDS: environmental and landscape protection, landscape architecture and planning, landscape and national park, outdoor advertising, visual pollution.

Corresponding author: Magdalena Szczepańska, Faculty of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University in Poznań, ul. B. Krygowskiego 10, 61-680 Poznań, Poland; e-mail: szmagda@amu.edu.pl

### Introduction

After the fall of the socialist regime, a fast growing economy, services, private sector and also the popularisation of the consumption society, in both Poland and Slovakia contributed to a rapidly progressing degradation of natural and landscape assets and widely understood public space of cities and villages. An element that intensifies spatial chaos is the visual pollution which is understood as an aesthetic issue and refers to the impacts of pollution that impair

one's ability to enjoy the view. Visual pollution is defined as all irregular formations that are most often found in nature (Kamičaitytė-Virbašienė et al. 2015; Portella 2016). Effects of exposure to visual pollution include: distraction, eye fatigue, decreases in opinion diversity, and loss of identity (Yilmaz, Demet 2011). The literature on the subject is focused on urban areas (Bankole 2013; Voronych 2013; Wakil et al. 2016; Cercleux et al. 2016). Visual pollution usually include: wind turbines (Jensen et al. 2014), GSM towers (Nagle, Copeland 2009), advertising (Chmielewski et al.





2016, 2018). The phenomenon of outdoor advertising, also termed 'external' or 'out-of-home' (OOH) contributes greatly to the appropriation of public space by the owners of OOH and an advertiser (Mattelart 2005). Advertising treated as a trade lever is to encourage individuals to buy a given product or service (Van der Wurff 2008) often using landscape values to this end (Maruani, Amit-Cohen 2013). The studies have revealed that outdoor advertising leads to a decrease in human perception capacities and can cause dangerous situations in road traffic (Bendak, Al-Saleh 2010). Outer factors (located outside a car) that distract a driver are estimated to cause over 10% of road accidents (Young et al. 2009). It has also been shown that large-format advertisements situated along the road distract drivers (Dukic et al. 2013; Edquist et al. 2012). Research has shown that variable, dynamic advertising attracts the attention of vehicle drivers more often and for longer periods of time than conventional advertising (Mackun et al. 2015). Posters, placed near roads in touristically popular areas of a high landscape value and protected because of this value, are nowadays a serious problem of an aesthetic, legal (Forczek-Brataniec, Zając 2014) and methodological nature (Kamičaitytė-Virbašienė et al. 2015; Chmielewski et al. 2016). Environmental and landscape assets are of particular importance for the multifunctional development of rural areas, especially their tourist and recreational functions (Antrop 2005; Stephenson 2008; Murzyn-Kupisz, Działek 2013). At the same time, national and landscape parks are areas significantly exposed to the pressure associated with the development of such activities as tourism, recreation, housing and related services, closely related to the strong presence of outdoor advertising. The research conducted by Szczepańska and Wilkaniec (2016) indicate the tendency for the accumulation of advertisements in rural areas attractive for tourism. Thus, the presence of outdoor advertising in the protected natural areas diminishes their landscape value and tourist attractiveness which may result in the decline in the competitiveness of a given area (Forczek-Brataniec, Zając 2014). For the above reasons, settlement units situated in landscape parks should strive even more for the preservation of spatial order. Visual pollution may be particularly significant in the areas where ecotourism activities are carried out and

may negatively influence the development of this function in sustainable landscape planning (Cetin et al. 2016; Cetin et al. 2018). In the literature on the subject, there is a lack of current and international comparative research focused on visual pollution caused by the presence of advertisement in natural and landscape protected areas. This study attempts to fill this gap.

Therefore, the main objective of the study was: the recognition of the formal-legal situation in relation to environmentally precious areas and the occurrence of advertisement carriers in those areas in Poland and Slovakia. In addition, it tried to identify the types and constructions of advertisement carriers, determine the scale of the advertising phenomenon in numbers, its size and location, and whether it fits in with the surroundings according to the principle of harmony in composition and colour theory. An attempt was also made to determine similarities and differences in the phenomenon of outdoor advertising in both countries. Moreover, the authors tried to draw up guidelines specifying desirable actions concerning the landscape protection in terms of the advertising policy and present positive examples of advertisements that would fit in with surroundings of great natural and cultural value.

## Area and methods of research

research The was conducted in the Wielkopolska National Park (Wielkopolski Park Narodowy WPN) and the Lednica Landscape Park (Lednicki Park Krajobrazowy LPK) in Poland and in the Malá Fatra National Park (Národný Park Malá Fatra NPMF) and the Little Carpathians Protected Landscape Area (Chráněná krajinná oblast Malé Karpaty CHKOMK) in Slovakia, with particular attention paid to public spaces which make these areas attractive (Fig. 1, Table 1). The protected areas mentioned are located in the vicinity of large cities, functioning at the same time as tourist and recreational places for these settlement centres. Across these areas there are also roads with significant importance for transport in this region. Moreover, these areas came under protection in a similar period, which can influence the shape of the developed advertising policy. The investigated parks are different in terms of the size and

Investigated parks	Park area (km²)	Buffer zone area (km²)	Date of establishment	Subject of protection
WPN-PL*	75.84	72.56	1957	postglacial landscape and its typical landforms
LPK-PL*	76.18	no data	1988	cultural landscape of Lednica Lake as well as forest and field landscapes, preservation of precious ecosystems with rare species of plants and animals and preservation of elements of cultural and historical heritage
NPMF-SK**	226.3	232.6	1988	land with varied geological structure and variety of relief forms, richness of biocoenoses, exceptional flora and fau- na, forest and mountain complexes
CHKOMK-SK**	646.1	no data	1976	rock formations, valleys and karst phenomena

Table 1. Characteristics of the selected parks.

Source: own study on the basis of \* - RDOŚ; \*\* - Information Portal of MoE SR 2016.

subject of protection, thus representing diversified landscape types. In Poland these are postglacial forms and a forest landscape (WPN) as well as a cultural (settlement), agricultural landscape (LPK), in Slovakia - rock formations (CHKOMK) and a geological structure along with the richness of biocoenoses (NPMF).

The research procedure was carried out based on the methods of qualitative and quantitative analysis, harmony principles in composition and

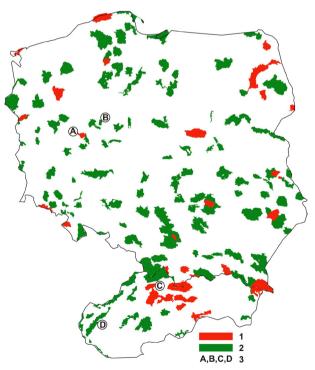


Fig. 1. National and landscape parks in Poland and Slovakia along with the location of the investigated areas: 1 - national parks; 2 - landscape parks; 3 investigated parks: A - Wielkopolska National Park (WPN); B - Lednica Landscape Park (LPK); C - Malá Fatra National Park (NPMF); D - Little Carpathians Protected Landscape Area (CHKOMK) Source: own elaboration.

colour theory: landscape valorisation methods (Zube et al. 1982) and visual analysis (Smardon et al. 1986). In particular, the following methods of analysis were used: interiors, views, panoramas (Wejchert 1984), landscape features (Niedźwiedzka-Filipiak 2009) and advertisement size and colour in relation to the surroundings (Itten 1970). What is more, the expert opinion method was applied based on the authors' practice and experience in landscape research (Ozimek et al. 2013). The obtained quantitative data were cartographically illustrated. Additionally, photographic documentation was produced, which enabled qualitative analysis. The stocktaking field research on the number and size of advertisements in the selected parks was conducted in September and October 2017. In the case of LPK-PL data were obtained in 2015 - before the 'landscape' act came into effect; they were updated in October 2018 to check the possible changes.

The field and stocktaking research was carried out along main roads in the chosen protected areas including parts of villages, parking places and attractive tourist sites on the area visible from the road. In the comparative studies the following features of advertisements were taken into account: approximate advertising space, intensity of occurrence (number and location, including the visibility from the road), construction type (a board on the rock, a board integrated with a building or fencing, advertising banner) and aesthetics (material and colouring used).

At the same time, an attempt was made to analyse the perception of an advertisement carrier in relation to the surroundings and a potential recipient in terms of size, material, colour, shape, background and location.

### Results of literature research

With accession to the European Union, Poland and Slovakia ratified, e.g. the European Landscape Convention (Council of Europe, 2019). The concept of landscape, according to ELC, puts human perception first, which is of particular importance when examining a 'usual', 'everyday' landscape that is a cultural landscape related to the immediate living surroundings, treated in contrast to protected places, i.e. the space to take over (Wiśniewska 2002). On initial examination, this type of landscape does not have the characteristics of 'priority/special' areas and in statistics it will present an average value, but this understanding is a chance of an increase in the importance of landscape issues in development strategies, development conceptions and renewal programmes. In order to encourage citizens and governments to greater care for the landscape, by means of identification, assessment, protection, management and planning processes, what was prepared was, e.g. a guide to good practices -"Identification of a landscape" (ECOVAST 2006).

There is the Advertising Council (AC) – an ethical self-regulating body for advertising, which deals with civic initiatives as well. The primary objective of AC is ensuring and promoting honest, decent, legal and trustworthy advertising. Since 1995 AC has been a member of the European Advertising Standards Alliance (EASA) – a European association of advertising companies with its seat in Brussels managing self-regulation of the industry. The aim of EASA is to represent the interests of marketing communication in the development of European legislation.

# Environmental protection and the advertising policy in Polish legislation

In Poland, the issues of environmental protection are regulated by the Act of 16 April 2004 on environmental protection (Journal of Laws 2004, No 92, item 880). The Act determines the objectives, principles and forms of protection of living and inanimate nature, and the landscape. Environmental protection, as understood by the Act, consists in the preservation, sustainable use and renewal of resources and elements of nature (...), including the landscape. In accordance with Article 6, the environmental protection forms are:

national parks, nature reserves, landscape parks, protected landscape areas, the Nature 2000 areas, natural treasures, documentation sites, ecological land, environmental and landscape complexes, species protection of plants, animals and fungi. In national parks only (and in nature reserves) "it is prohibited (...) to place boards, inscriptions, advertisements and other signs unrelated to nature protection, access to a park or nature reserve, ecological education, with the exception of road signs and other signs related to security protection and public order" (Article 15(19)).

In 2013, the legal work concerning landscape issues started, culminated in the Act of 24 April 2015 on the amendment of certain laws in connection with the strengthening of protection tools (Journal of Laws 2015, item 774). It should be emphasised, however, that it is not very transparent because it introduces changes to other acts. The act defines the concept of landscape, priority landscape, introduces provisions on a landscape audit and specifies what should be understood as an advertisement and, e.g. an advertising board, advertising device, signboard. It gives the opportunity to bring in an advertising fee which could be collected by self-governments if they decided to regulate the rules on the form and situation of advertisements.

Nowadays in Poland measures are taken to protect the cultural landscape, e.g. the establishment of landscape parks in the 1990s, and cultural parks in subsequent years. An instance of the limitation of the negative impact of outdoor advertising can be cultural parks founded in the centres of big cities (e.g. Cracow and Wrocław).

An impulse to create a rural space, including a public one of a representative and recreational character, was given by regional programmes for rural renewal carried out by self-governments, and following them – measures intended to revitalise the countryside in the Sector Renewal Programme (SRP 2004 – 2006), and then in the Rural Development Programme (RDP 2007 – 2014). In this context, the development of principles concerning the appearance of advertisements in the revitalised space (Chigbu 2012; Wilczyński 2009; Szczepańska, Wilkaniec 2017) seems of particular importance.

It should be mentioned that in accordance with the Act of 27 March 2003 on planning and spatial development (Journal of Laws 2003, No 80, item 717) a public area ought to be understood as "an area of particular importance for meeting inhabitants' needs, improving their standard of living, and conducive to establishing social contacts due to its situation as well as functional and spatial properties, determined in the study of conditions and directions for the spatial development of a commune". In the context discussed, of significant importance are provisions of the Charter of Public Space (2009), in which it is defined in the socio-economic categories and understood as the commonly used good, intentionally shaped by people, according to social principles and values - serving to fulfil needs of local and supra-local communities. In the light of the provisions of the Charter, the most important actions of public authorities are, among others: respect for good neighbourhood understood as counteracting the disfigurement of the public space and open areas by advertising, information, road and technical devices.

## Environmental protection and the advertising policy in Slovak legislation

Outdoor advertising gradually became an integral part of the transforming society in Slovakia. When the first billboards started to appear after the fall of the socialist system, there was no awareness of the importance of this advertisement carrier, and especially its impact on public space. On the one hand, this type of advertisement conveys useful information and brings necessary financial resources to the local budget, but on the other, it changes the appearance of the public space, sometimes even causing its degradation (visual pollution). In general, advertising is neither good, nor bad. As many other communication means, it is only a tool one can use either for good or bad purposes (Petro 2016). Naturally, outdoor advertising has its advocates and opponents. In Slovakia, a divided opinion about advertisements has resulted in the creation of the External Advertising Association - EAA) in 1989. It aims at the promotion of common interests of outdoor advertising, the coordination of its development, the dissemination and consolidation of reputation on the advertising market, among advertising media and also the cooperation with the government and local authorities in the preparation of legislation concerning outdoor and other advertisements (Outdoor Advertising Association).

Outdoor advertising in Slovakia is regulated by the Act on advertising 147/2001 which does not directly regulate the way it is placed nor does it impose this obligation on municipalities. Similarly, the Act on building code 50/1976 does not specify acceptable places for out-of-home advertisements, although its last amendment in 2015 introduced certain regulations on outdoor advertising. Changes were aimed at mitigating visual pollution produced as a result of the excessive number of advertising devices which burdened the environment, and also combating billboards without building permit. In particular, one of the amendments brought the following changes in this matter (TASR):

- 100 m protection zone without billboards has been established outside municipalities, along highways and expressways that serve international transit. The billboards built close to them should be removed within two years;
- the provisions on licensing outdoor advertising have been tightened by changing the classification of billboards from an advertising device to an advertising construction subject to the Act on building;
- the fees for advertisements from now on depend on their size following three size categories of constructions that have been created, the advertising size up to 3m<sup>2</sup>, from 3 to 20 m<sup>2</sup> and the largest one with over 20 m<sup>2</sup>.

Finally, the specification of outdoor advertising location is partly included in the Act on road transport 135/1961 which regulates placing advertisements on roads and prohibits installing any objects that are a solid obstacle. Moreover, one must not place advertisements at intersections if they obscure a driver's view, although this assumption is based solely on the subjective assessment of all stakeholders included. In this context, the European Agreement on Main International Traffic was introduced, which calls for banning any billboards from international roads. This recommendation is justified as follows: "the installation of noise barriers along roads means that the user loses a great deal of his information about the environment and has the impression of being "shut in"; such installations should therefore be constructed so as to ensure that they are integrated to the maximum into the landscape and so as to compensate users for the information lost. For aesthetic and safety reasons, commercial advertising near international highways should be avoided" (TRANS). Similarly, the Nature Protection Act 543/2002 specifies the principles on placing advertisements accordingly. It states that without clear authorisation it is not possible to place advertisements:

- the approval of the nature protection body is required to place advertising devices outside the built-up area of a commune where the second degree of nature protection is in force (Article 13(2));
- the approval of the nature protection body is required to place any advertising, information or promotional equipment (AIP) devices as well as all other advertising or promotional banners or boards in the area where the third degree of nature protection is in force (Article 14(2));
- AIP devices and also all other advertising or promotional labels or boards cannot be placed in the area where the fourth and fifth degrees of nature protection are in force (Article 15 and Article 16(1)).

The more detailed rules about placing advertising devices in Slovakia can be further determined by municipalities in generally binding regulations. However, there are only a few cities or villages with such regulations. An example can be the Old Town in Bratislava which,

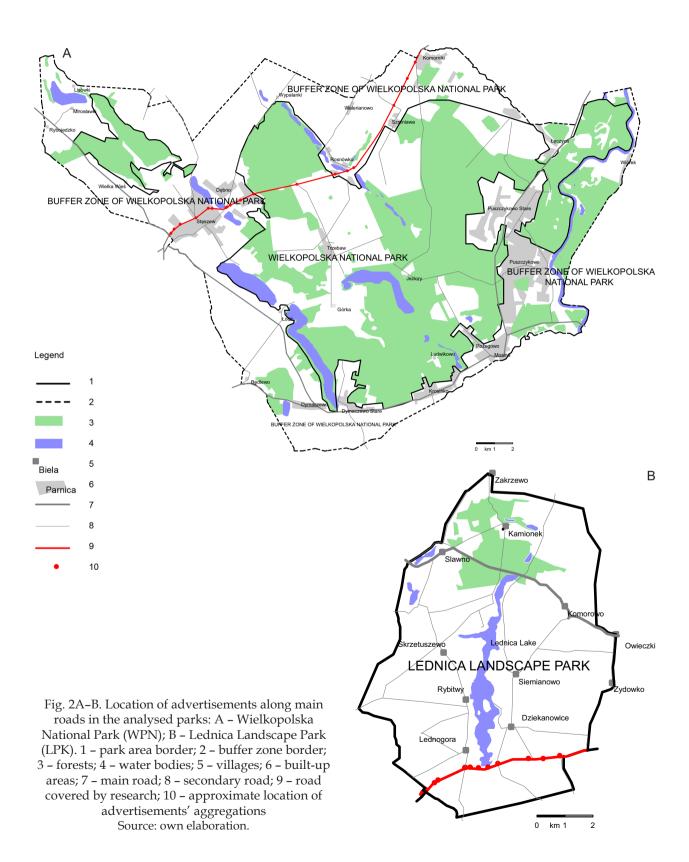
however, was sued by the Outdoor Advertising Association on the outdoor advertising regulations which makes the regulations ineffective. Therefore, the existing regulations allow semi-legal advertising devices which cannot be moved or removed. It can be said that there is no clear conception regarding not only the placement of advertising devices, but also how they should look like (Petro 2016). The lack of clear rules on the placement of advertisements, common in Western countries, calls for more effective regulations on advertising in the public space. While nowadays it is common for developed countries to regulate external shop displays, signboards and inscriptions, and even standards for advertisement carriers are adopted (regarding colour, size, material and location), lack of such rules in Slovakia, as described above, leaves the burden of visual pollution mostly on the shoulders of activists. (Petro 2016). At municipal level, several cities and villages are already engaged in the Message for Mayor project by means of which suggestions of self-governments or citizens are implemented in order to solve the problem of visual pollution.

Similarities and differences of the legal system and advertising policy regarding protection forms in Polish and Slovak legislation were collected in Table 2.

Table 2. Comparison of the legal system and advertising policy regarding protection forms in Polish and Slovak legislation.

1 111 128 1111 111									
Category	Poland	Slovakia							
Legal regulation and document									
European Union law	<ul> <li>Union of Associations Advertising Council - no regulations referring directly to landscape or environment</li> <li>European Landscape Convention - prepared to encourage citizens and governments to greater care for the landscape, by means of identification, assessment, protection, management and planning processes</li> </ul>								
National law	there are some regulations in different legal acts concerning landscape protection and outdoor advertisement, e.g. 'landscape act' – defines advertisement and its forms, gives possibility of introducing fees for presence of advertisement in space	there are some regulations in different legal acts, e.g. Act on advertisement and Act on landscape and environmental protection							
Local law	local spatial development plan – can determine character of advertisement and its location  Form of legal protection	approval of the generally binding regulations, municipal level can determine character of advertisement and its location							
National park	ban on placing advertisements	requires permission of the nature protection authority							
Landscape park	no provisions concerning advertisements	requires permission of the nature protection authority							

Source: own study.



## Results of stock-taking research

The research conducted has shown that buffer zones of national parks are particularly exposed to the presence of advertising which is proved by the total area of catalogued advertisements (Figs 2 and 3; Table 3). Both in Poland and Slovakia this is over 700m², where the mean advertisement area is strongly diversified (NPMF-SK = 2.5m², WPN-PL = 9.5m²). A positive thing is the lack of ads in the Polish national park which is indicative of the effectiveness of the existing legislation. On the other hand, in the Slovak national park what was noted was 48 advertisement carriers with a total area of almost 400m², which gives a

mean area of 8m<sup>2</sup>. The advertising policy concerning landscape parks in the both investigated countries is completely different. In the case of LPK-PL, the concentration of advertisements is 16 items per 1 km of a road, for CHKOMK-SK it was a mere 1.5. However, it can result from the character of No. 503 road as well as the lack of major settlement units and provided services in this part of the park, in spite of the vicinity of Bratislava.

An important factor in the perception of advertisements situated along the road was the direction and speed of movement and the location of the carrier (parallel or transverse to the road) and also its height and distance from the road. A

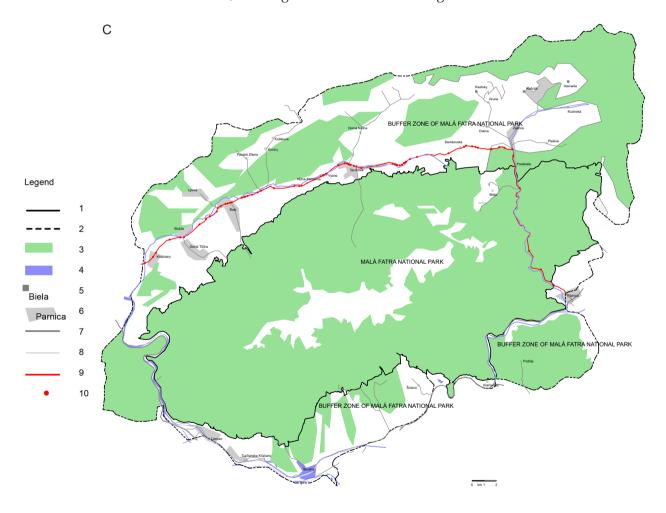


Fig. 2C. Location of advertisements along main roads in the analysed parks: C – Malá Fatra National Park (NPMF). 1 – park area border; 2 – buffer zone border; 3 – forests; 4 – water bodies; 5 – villages; 6 – built-up areas; 7 – main road; 8 – secondary road; 9 – road covered by research; 10 – approximate location of advertisements' aggregations

Source: own elaboration.

dominating form of advertisements in the studied areas were billboards, banners placed on fencing, and boards on buildings and fencing. The concentration of advertisements caused information chaos. Situated along roads, they were to attract

the observer's attention (as is their purpose), however by doing so, they distracted drivers from observing the surroundings which could increase the risk of a collision or accident. Advertisements in the investigated sections of roads were visible

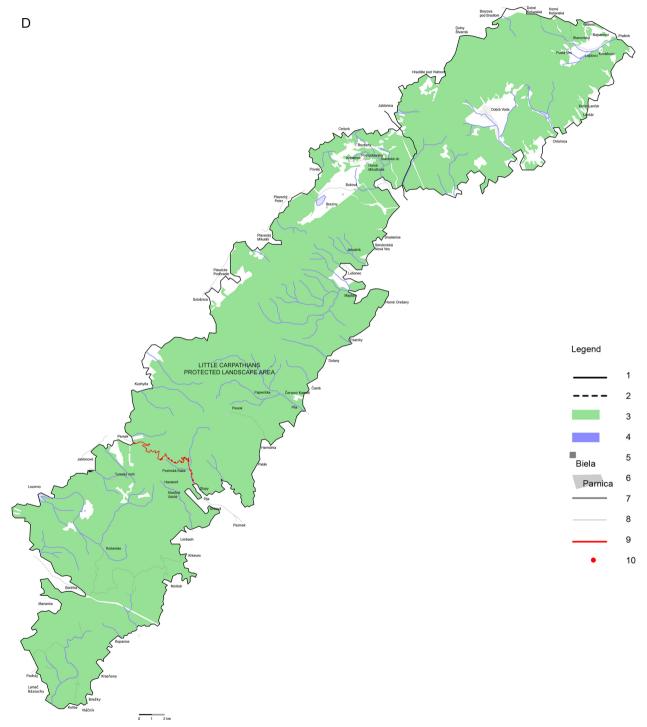
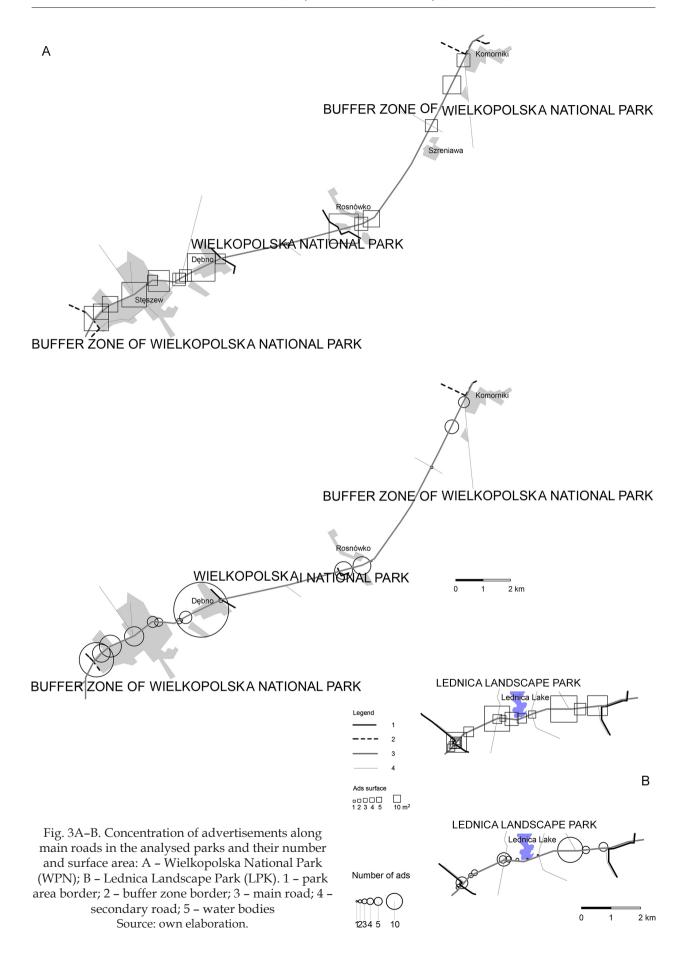


Fig. 2D. Location of advertisements along main roads in the analysed parks: D - Little Carpathians Protected Landscape Area (CHKOMK). 1 - park area border; 2 - buffer zone border; 3 - forests; 4 - water bodies; 5 villages; 6 - built-up areas; 7 - main road; 8 - secondary road; 9 - road covered by research; 10 - approximate location of advertisements' aggregations Source: own elaboration.



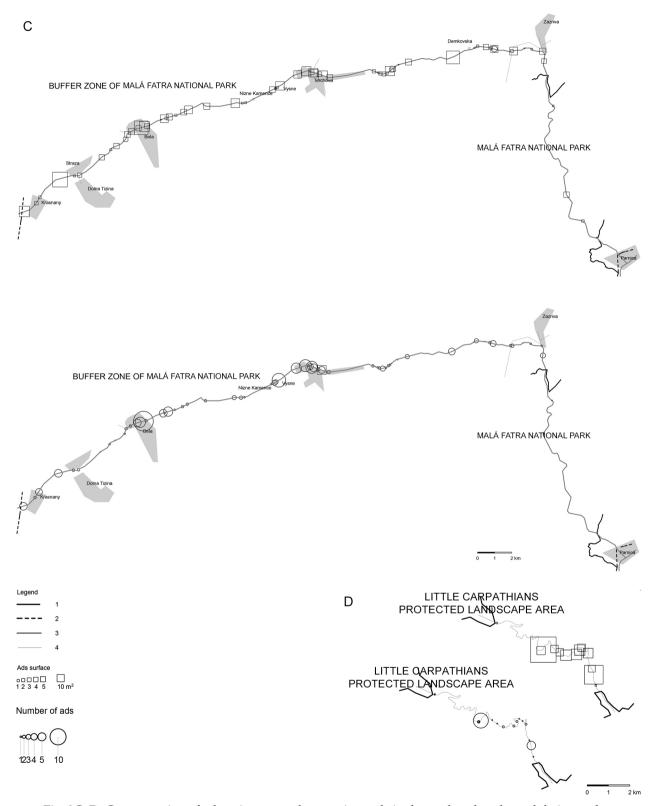


Fig. 3C-D. Concentration of advertisements along main roads in the analysed parks and their number and surface area: C - Malá Fatra National Park (NPMF); D - Little Carpathians Protected Landscape Area (CHKOMK); 1 - park area border; 2 - buffer zone border; 3 - main road; 4 - secondary road; 5 - water bodies Source: own elaboration.

Parameters	WPN-PL		LPK-PL	NPMF-SK		CHKOMK-SK
Farameters	park	buffer z.	park	park	buffer z.	park
Road number	No. 5	No. 5	No. 5	No. 583	No. 583	No. 503
Road length (km)	5	8	5	31	22	10
Number of ads	0	76	(96)* 80	48	306	16
Total advertising area (m²)	0	721.3	(370)* 365.5	381.4	791.2	34.5
Mean advertisement area (m²)	0	9.5	(3,8)* 4.6	8	2.5	2
Number of ads/1km of road	0	9.5	(19)* 16	1.5	14	1.5

Table 3. Characteristics of the advertising phenomenon in the investigated parks.

\* (data of 2015) – data update in 2018 did not show a significant influence of the advertising act on the number and size of advertisements in relation to the data of 2015. The number of ads declined, which was connected with the following, e.g. some advertisers stopped their activity, an alternative – faster road was constructed and traffic was reduced in the studied area. The total advertising area slightly dwindled, and at the same time the mean area increased as a result of the change of the old and outdated form into a new one.

on average from a distance of 300 meters. A high carriers were characterised by a greater range of visibility competing with valuable landscape elements, thereby appropriating the landscape under protection. Advertisement carriers were most frequently located in settlements and at

the significant route points in terms of transport: main intersections, entrances to institutions connected to tourism, i.e. museums, accommodation and catering facilities.

In all the investigated parks what was observed was a clear tendency to the concentration









Fig. 4. Examples of not harmonious solutions for the placement of advertisement carriers in relation to a landscape: A – unfavorable location of an advertisement – visual competition with a historic object; B – destroyed and outdated ads degrading a landscape; C – unfavourable location of an advertisement – competing visually with a protected landscape and information signs; D – information chaos.

of ads in the vicinity of stores, bus shelters, at parking lots and tourist signposts which made them compete with one another in the form, size and colouring (Fig. 4). The catalogued advertisement carriers had various forms and usually contrast colouring, which clashed with the surrounding area, or even degraded the overall view. It is a disturbing fact that they were often located in the most valuable landscape areas (forests, lakes, panoramic and wide views).

In the case of LPK-PL, banners and boards informing about properties for sale were an important category of ads. They were usually vibrant yellow and made of low quality material (probably due to its temporal display). Another group of carriers was ads concerning local services - usually situated in the property area (fencing) or on a facility (e.g. construction and automotive services). Advertisements of services and goods related to the assets of a given place were quite specific: local cuisine, handicraft, horse-riding. They were often subdued in terms of colour,

form, and material applied, integrated into the surroundings, yet visible and legible. This may be due to the fact that these are more sophisticated services, 'niche' ones, targeting more demanding clients. In both LPK-PL and NPMF-SK the cause for concern is the form of advertisement carriers regarding agritourism and souvenir services, including traditional local products (e.g. sheep cheese) and handicraft - their low quality was noted in the investigated space. Moreover, they are often characterised by an unfavourable location connected with the lack of respect for the landscape, which is a significant factor in running this type of business activity.

It was only in the case of LPK-PL that an example of a positive systemic advertisement for the park, the open air museum and the museum was recorded (Fig. 5). Unfortunately, small dimensions, a unified and subtle form, subdued colouring of these carriers cause them to disappear among other ones. At the same time, in the investigated area what was observed was









Fig. 5. Examples of good practice in the placement of advertisement carriers in relation to a landscape: A - a favourable selection of the location and the color and size of the advertising device in relation to the environment; B - a good example of an integrated/systemic advertisement; C - harmonious combination of an advertisement and fencing; D - harmonious adjustment of a location, shape and material of an advertising medium to a service and commercial facility.

a positive initiative of locating announcement posts in important and central places of a village which facilitates the achievement of spatial order. Unfortunately, it is not used very often. Other observed examples of good practice are presented in Fig. 5.

#### Discussion

The phenomenon of outdoor advertising is particularly worrying in protected areas due to the occurrence of natural and landscape assets. A fast growing economy, services, private sector and also the popularisation of the consumption society model, especially in the case of post-communist countries, contributed to a rapidly progressing degradation of natural and landscape assets and widely understood public space. These countries have only been looking for an effective system of nature and landscape protection since the 1990s. Both in Poland and Slovakia measures are taken to limit, organise or liquidate advertising in the urban space, however, open areas and visually precious landscapes are still subject to a considerable pressure of outdoor advertising a visual pollution. Many authors observe in the post-communist countries the problem of the strong presence of outdoor advertising in public spaces and landscapes (Kamičaitytė-Virbašienė 2015; Madleňák, Hudák 2016; Suditu et al. 2016). The living space of towns, villages and even households, contains quite an urgent presence of various types of advertising. As our research shows, this problem also applies to areas valuable in terms of landscape and nature, and thus also to tourism. Ubiquitous advertising is not art in its nature but it is a strange short genre linking the story to information about a certain product. The attitude towards advertising as a social phenomenon is a complement to other important phenomena of social life, it is part of the society's lifestyle. In this context, an overwhelming presence of advertising often results in a disintegrated public space, manifested by a lack of organisational strength with an institution that is easy to handle by interest groups, and the public interest is giving way to individual gains. In practice, this is manifested by the violation of existing legal norms and regulations, such as those non-compliant with land-use plans, or their purposeful

modifications, as well as public space flooded with advertising – causing visual pollution (Zich 2013).

Similarly to Poland and Slovakia, in Romania (one of post-communist countries) regulations concerning outdoor advertising were prepared gradually over the years after the fall of communism. These issues are regulated most precisely by legal norms related to road safety protection. Another similarity is the possibility of incorporating provisions on advertising in the acts of local law related to spatial planning. However, just like in Poland and Slovakia, only to a minor degree does this possibility influence the limitation of degradation of landscape and space by outdoor advertising. In Romania, for instance, since 2001 advertisements have been banned from displaying in the zones of historic sites protection, nevertheless, the law is not effectively enforced (Kamičaitytė-Virbašienė 2015).

Generally, there is a noticeable discrepancy between legal regulations and their observance in regard to advertisements in public spaces (Suditu et al. 2016). A key problem is an illegal placement of advertisements, e.g. in the area of road lanes, which occurs in Poland even in the central parts of the cities protected as culture parks. As demonstrated by the control of the Supreme Audit Office (NIK) that examined seven such places on average, almost 60% of advertisements situated at the road lanes of the audited cities were illegal. Control was set up, among others, to solve the problem of the degradation of public spaces through an excess of advertisement carriers (NIK 2017). Also, in the central part of Bucharest, protected by restrictive rules on the situation of advertisement carriers, their large number was recorded (Suditu et al. 2016). In studies presented by Maciejczak-Kwiatkowska (2018) on the quality of public spaces, a large proportion of Poles, against experts' opinions on the appearance and the way the Polish landscape is developed, regard their surroundings as pretty. It has also been noted in the studies commissioned by the National Centre for Culture Poland that respondents more often than in the previous years agreed that space management should be subject to regulations and not only lie in individual hands, and local authorities ought to be responsible for the shape of the surroundings (Maciejczak-Kwiatkowska 2018). Nevertheless, the possibility of creating a local law regulating the deployment and form of advertisements is not commonly used. Two years after introducing provisions allowing such regulations (the state up to 30 August 2017) only five communes adopted so-called 'landscape resolutions' (NIK 2017). Out of the communes which answered in the survey carried out by the Institute of Urban and Regional Development in October 2017 (432 communes), only 13.2% introduced the regulations on outdoor advertising. Most self-governments did not see such need (Maszewski 2018). However, the problems connected with the state of public space in eastern European cities and the influence outdoor advertising exerts on it are noticed in the scientific literature (Chmielewski et al., 2016, Listwan-Franczak 2016; Suditu et al. 2016). On the other hand, what is rarely discussed are problems connected with the impact of outdoor advertising on the open landscape, including the one naturally and visually valuable (Kamičaitytė-Virbašienė 2015). As shown in the conducted research, low interest in the problem does not result from the lack of concentration of advertisement carriers in such locations in Poland, Slovakia and other post-socialist countries. For example, Tomčík (2011) states on the basis of the empirical survey that there are around 20,000 billboards in the Czech Republic. To realise the saturation of 'physical public space' by this specific media type - the 106.2 km-long road between Prague and Liberec is covered by 284 billboards or bigboards. Thus, an outdoor-advertisement can be recorded every 370 m on average. He further observed that there are nearly 500 outdoor advertisements along the most important highway D1 from Prague to Brno in the Czech Republic.

## Summing-up and conclusions

When it comes to the advertising policy, Polish and Slovak legal regulations are similar. They determine mainly the limitations on placing outdoor advertisements in areas embraced by the highest forms of environmental protection and enable self-governments to introduce local regulations which are not, however, commonly adopted. Additionally, the Slovak law determines the rules on placing advertisement carriers at roads.

New provisions in Polish legislation, i.e. the 'Landscape Act' should be recognised as a success; however, it is a disturbing fact that its influence on the number and quality of advertisements in the investigated area is small. What is especially troublesome is the lack of regulations on the advertising policy with regard to landscape parks - as the name itself suggests it is those very parks that are supposed to protect the landscape, yet the advertisement is one of the important threats for them. The landscape, which is a common good, is being appropriated. Therefore, there is a pressing need to introduce provisions in the protection plans of parks, especially landscape ones, on the ban on or the limitation of advertisements. Due to a frequent occurrence of economic functions in these areas, especially tourist services, it is also necessary to specify formal requirements concerning advertisements.

The conducted research has shown a tendency towards the concentration of advertisements around touristically attractive places with special landscape values and at main transport nodes. Such a location can limit visibility and safe driving. Ad carriers catalogued in the investigated parks have various forms and are usually characterised by contrast colouring which adversely affects or even degrades the surroundings, lowering the landscape values and thus tourist attractiveness. The production quality of advertisement carriers gives a serious cause for concern; their location is often characterised by the lack of respect for landscape assets which are a basic factor behind the development of tourist economic activity for the studied parks. Moreover, many advertisement carriers are not removed, even though they have ceased to perform their role (inscriptions have become illegible, carriers have been damaged or ads have been removed from the construction). Administration authorities could create informative and landscape order easier if they promoted good patterns for advertisement carriers and held consultations with a local community and entrepreneurships.

- In view of the above, it would be necessary to:
- introduce limitations regarding the location of advertisement carriers in the vicinity of tourist information signs due to the superiority of functions and safety of travellers,
- ban advertisement carriers degrading landscape values,

- create a catalogue of good practices or readymade patterns, especially for agritourist activity, taking into account the font, colouring and material the ad is made of, considering local resources (wood, stone, brick, etc.), which could emphasise the folkloristic values of rural areas and be indicative of tradition in a given place.
- systematise advertising information in the form of an integrated advertisement with a unified colour and form, in which many entrepreneurs could promote their services,
- oblige advertisers to take down advertisement carriers if they stopped their business activity,
- unify the form of banners and boards informing about the sale of property, determining their general size, colouring, font and also the place of location (fencing, building),
- promote using virtual space, especially websites of parks or administration units, where an ad could be displayed in the format specified by authorities,
- consider the scale of charges for advertising space and allocate the funds to a free integrated advertising system and consultations with a graphic designer and landscape architect.

## Acknowledgment

The paper was prepared as part of the following research projects: APVV-17-0079.

#### References

- Bankole O.E., 2013. Urban environmental graphics: Impact, problems and visual pollution of signs and billboards in Nigerian cities. *International Journal of Education and Research* 1(6): 1–12.
- Bendak S., Al-Saleh K., 2010. The role of roadside advertising signs in distracting drivers. *International Journal of Industrial Ergonomics* 40(3): 233–236.
- Brown G., 2006. Mapping landscape values and development preferences: A method for tourism and residential development planning. *International Journal of Tourism Research* 8(2): 101–113.
- Cercleux A.L., Merciu F.C., Merciu G.L., 2016. A model of development strategy encompassing creative industries to reduce visual pollution – Case study: Strada Franceză, Bucharest's Old City. Procedia Environmental Sciences 32: 404-411
- Cetin M., Sevik, H., 2016. Assessing potential areas of ecotourism through a case study in Ilgaz Mountain National Park. In: Butowski L. (ed.), *Tourism from empirical research towards practical application*. BoD–Books on Demand, Norderstedt, Germany: 81–110.

- Cetin M., Zeren I., Sevik H., Cakir C., Akpinar H., 2018. A study on the determination of the natural park's sustainable tourism potential. *Environmental Monitoring and Assessment* 190(3): 167.
- Chigbu U.E., 2012. Village renewal as an instrument of rural development: Evidence from Weyarn, Germany. *Community Development* 43(2): 209–224.
- Chmielewski S., Lee D.J., Tompalski P., Chmielewski T.J., Wężyk P., 2016. Measuring visual pollution by outdoor advertisements in an urban street using intervisibility analysis and public surveys. *International Journal of Geo*graphical Information Science 30(4): 801–818.
- Chmielewski S., Samulowska M., Lupa M., Lee D.J., Zagajewski B., 2018. Citizen science and WebGIS for outdoor advertisement visual pollution assessment. *Computers*, *Environment and Urban Systems* 67: 97–109.
- Council of Europe, 2019. European Landscape Convention Chart of signatures and ratifications of Treaty 176, online: https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176/signatures
- Dukic T., Ahlstrom Ch., Patten Ch., Kettwich C., Kircher K. 2013. Effects of electronic billboards on driver distraction, *Traffic Injury Prevention* 14(5): 469–476. dx.doi.org/1 0.1080/15389588.2012.731546
- Edquist J., Horberry T., Hosking S., Johnston I., 2011. Effects of advertising billboards on simulated driving. *Applied Ergonomics and Transportation Safety* 42(4): 619–626. dx. doi.org/10.1016/j.apergo.2010.08.013
- Europejska Konwencja Krajobrazowa (European Landscape Convention Journal of Laws 2006, No 14, item 98).
- External Advertising Association, on-line: www.avr.sk (accessed: 13 May 2019).
- Forczek-Brataniec U., Zając E., 2014. *Reklamy w krajobrazie Pienin. Pieniny: przyroda i człowiek* (Advertisements in the Pieniny landscape. The Pieniny mountains: Nature and a human being) Wydawnictwo Politechniki Krakowskiej, Kraków 13: 101–112.
- Information Portal of MoE SR (2016). https://www.enviro-portal.sk/indicator/detail?id=1964
- Itten J., 1970. The elements of color. John Wiley & Sons.
- Jensen C.U., Panduro T.E., Lundhede T.H., 2014. The vindication of Don Quixote: The impact of noise and visual pollution from wind turbines. *Land Economics* 90(4): 668–682.
- Kamičaitytė-Virbašienė J., Godienė G., Kavoliūnas G., 2015. Methodology of visual pollution assessment for natural landscapes. Journal of Sustainable Architecture and Civil Engineering 13(4): 80–91.
- Listwan-Franczak K., 2016. Wpływ reklamy zewnętrznej jako narzędzia kampanii wyborczej na okresowe kształtowanie przestrzeni publicznej miast, na przykładzie miasta Krakowa (Impact of outdoor advertising as a tool of an election campaign on the periodic shaping of the public space of cities on the example of the city of Cracow). Annales Universitatis Mariae Curie-Sklodowska, sectio B-Geographia, Geologia, Mineralogia et Petrographia 71(2).
- Maciejczak-Kwiatkowska Z., Retko-Bernatowicz M., Wiśniewski R., 2018. W dialogu z otoczeniem? Społeczne postrzeganie przestrzeni publicznej i architektury w Polsce. Raport z badania przeprowadzonego przez Narodowe Centrum Kultury (In dialogue with the environment? Social perception of public space and architecture in Poland. Report from a study conducted by the National Centre for Culture), Warszawa https://nck.pl/upload/2018/11/spoleczne-postrzeganie-architektury\_raport.pdf

- Mackun T., Jamroz K., Żukowska J., Rychlewska J., 2015. Zagrożenia dla uczestników ruchu drogowego stwarzane przez reklamy widziane z drogi (Risks for road users posed by advertisements seen from the road). Drogo-
- Madleňák R., Hudák M., 2016. The Research of visual pollution of road infrastructure in Slovakia. In International Conference on Transport Systems Telematics. Springer, Cham: 415-425.
- Maruani T., Amit-Cohen I., 2013. Marketing landscapes: The use of landscape values in advertisements of development projects. Landscape and Urban Planning 114: 92-101.
- Maszewski M., 2018. Uchwały reklamowe w świetle ankiety Instytutu Gospodarki Przestrzennej i Mieszkalnictwa; on-line: http://jetline.pl/aktualnosci/\_uchwaly-reklamowe-i-ankieta-igpim (accessed: 30 June 2019)
- Mattelart A., 2005. Advertising international: The privatisation of public space. Routledge.
- Murzyn-Kupisz M., Działek J., 2013. Cultural heritage in building and enhancing social capital. Journal of Cultural Heritage Management and Sustainable Development 3(1):
- Nagle C., 2009. Cell phone towers as visual pollution. Notre Dame Journal of Law, Ethics and Public Policy 23: 537.
- NIK 2017. Kształtowanie krajobrazu i przestrzeni publicznej w Polsce. Informacja o wynikach kontroli Najwyższej Izby Kontroli (Shaping the landscape and public space in Poland. Information about the results of the audit of the Supreme Audit Office). https://www.nik.gov.pl/plik/ id,15670,vp,18154.pdf
- Ozimek P., Böhm A., Ozimek A., Wańkowicz W., 2013. Planowanie przestrzeni o wysokich walorach krajobrazowych przy użyciu cyfrowych analiz terenu wraz z oceną ekonomiczną (Planning space of a high landscape value using digital land analysis along with economic assessment). Wydawnictwo Politechniki Krakowskiej, Kraków.
- Petro M., 2016. Vizuálny štýl mesta a vidieka na slovensku - morálny aspekt, Krajobraz semantyczny wsi i miast. (Semantic landscape of rural and urban areas). In: Marecki J., Rotter L. (eds), Symbol. Znak. Rytuał (A symbol, a sign, a ritual). Kraków: 39-51. DOI: http://dx.doi. org/10.15633/9788374385183.04
- Portella A., 2016. Visual pollution: Advertising, signage and environmental quality. Routledge.
- Smardon R.C., Palmer J.F., Felleman J.P. (eds), 1986. Foundations for visual project analysis. Wiley, New York.
- Stephenson J., 2008. The cultural values model: An integrated approach to values in landscapes. Landscape And Urban Planning 84(2): 127-139.
- Szczepańska M., Wilkaniec A., 2016. Outdoor advertising in rural areas attractive for tourism. Studia Obszarów Wiejskich 43: 85-98.
- Szczepańska M., Wilkaniec A., 2017. Rola zasobów krajobrazu kulturowego obszarów wiejskich w procesie od-

- nowy wsi i rozwoju lokalnego na przykładzie Długiej Gośliny w województwie wielkopolskim (Role of cultural landscape resources of rural areas in the process of rural renewal and local development. The case of Długa Goślina in the Wielkopolska Province). Studia Obszarów Wiejskich 45: 85-104.
- The News Agency of the Slovak Republic (TASR), http:// www.teraz.sk/english/online-reports-and-regulated-browse/112873-clan.html?mostViewedArticlesInSectionTab=0.
- Tomčík M., 2011. Marketing and public space, Proceedings of VŠFS. Prague.
- TRANS, 2002. Consideration of proposals for amendments to Annex II of the AGR - transmitted by the Trans-European North-South Motorway (TEM) Project. UNITED NA-TIONS - Economic and Social Council; on-line: https:// www.unece.org/fileadmin/DAM/trans/doc/2002/ sc1agr/TRANS-SC1-AC5-2002-06e.pdf
- Ustawa z dnia 16 kwietnia 2004r. o ochronie przyrody (Act of 16 April 2004 on environmental protection) (Journal of Laws 2004, No 92, item 880).
- Van der Wurff R., Bakker P., Picard R.G., 2008. Economic growth and advertising expenditures in different media in different countries. Journal of Media Economics 21(1): 28 - 52
- Voronych Y., 2013. Visual pollution of urban space in Lviv. Przestrzeń I Forma.
- Wakil K., Hussnain M.Q., Tahir A., Naeem M.A., 2016. Regulating outdoor advertisement boards; employing spatial decision support system to control urban visual pollution. In: IOP Conference Series: Earth and Environmental Science 37(1): 012060. IOP Publishing.
- Wilczyński R., 2009. Programy odnowy wsi instrumentem zachowania i kształtowania specyfiki przestrzeni regionalnej (Programmes for rural renewal as a tool for the preservation and shaping of the specificity of regional space). Architecturae et Artibus 1: 83-86.
- Wiśniewska W., 2002. Krajobrazy codzienne (Everyday landscapes). Zeszyty Naukowe Politechniki Łódzkiej 903. Wydawnictwo Politechniki Łódzkiej, Łódź.
- Yilmaz D., Sagsöz A., 2011. In the context of visual pollution: Effects to trabzon city center Silhoutte. Asian Social Science 7(5): 98.
- Young M.S., Mahfoud J.M., Stanton N.A., Salmon P.M., Jenkins D.P., Walker G.H., 2009. Conflicts of interest: The implications of roadside advertising for driver attention. Transportation Research Part F: Traffic Psychology and Behaviour 12(5): 381-388.
- Zich F., 2013. Zity prostor, mentalni mapy a reklama. Communication Today 1: 6-17.
- Zube E.H., Sell J.L., Taylor J.G., 1982. Landscape perception: Research, application and theory. Landscape Planning 9(1): 1-33.