

Overview of visual smog initiatives in selected locations around the world

► Adéla Šnajdrová » Brno University of Technology, Faculty of Business and Management, Kolejní 2906/4, Brno 612 00, Czech Republic; email: adela.snajdrova@vut.cz

* 1. Introduction

The topic of visual smog is increasingly relevant. Wilson (2022, 2023), in his studies analysing over 400 different articles, finds that it is a highly multidisciplinary topic. He mentions that there is a need to focus on using the appropriate theoretical framework and data size to understand and make sense of outdoor advertising. Wilson (2022) himself introduces 20 research questions designed to propel scientific research forward.

Visual pollution (smog) is the compound effect of clutter, disorder and excess of various objects and graphics in the landscape such as outdoor advertisements, street furniture, lighting features, vegetation features and other objects (Chmielewski, 2015).

Thus, visual smog refers to the infestation of public space by advertising, which destroys the uniqueness of cities and landscapes by its aggressiveness. Veronika Rút Fullerová (2020d) states that it is *“an artificial, garish panopticon obscuring the true face of the city, destroying its uniqueness. To a large extent, it concerns graphic design – advertisements on the premises and separate media outside the premises (outdoor advertising).”* It is practically anything that negatively affects peo-

ple’s view in public space (scattered rubbish, garish colours of building facades, large numbers and repetitive traffic signs). According to experts, visual smog negatively affects living conditions and people’s health, as well as drivers’ attention on the roads. It can be discussed whenever the observer is forced to see the advertisement (Fullerová, 2020d).

The aim of this paper is to provide an overview of initiatives and approaches to visual smog in selected locations around the world.

2. Literature review and the theoretical framework of this research

The following subsections will explain the terms advertising, outdoor advertising and its subdivision, outdoor space and visual smog. It will also be shown what the sources of visual smog are, what problems arise in relation to visual smog and how visual smog and advertising can be assessed.

2.1 Advertisement

Advertising is a paid form of presenting an offer in the media, it is intense and can reach a wide range of people. On the other hand, it can also be impersonal and thus less persuasive. It is a unidirection-

al form of communication and can be quite costly. The advertising message should have credible and understandable content for the intended audience and highlight the features that distinguish it from competitors (Foret, 2003).

At present, advertising in the Czech Republic is defined by Act No. 40/1995 Coll., on the regulation of advertising, as: “[...] *announcements, demonstrations or other presentations disseminated mainly by means of communication media, aimed at promoting business activities, in particular promoting the consumption or sale of goods, the construction, lease or sale of real estate, the sale or use of rights or obligations, the promotion of the provision of services, the promotion of a trademark [...]*”.

The Advertising Council defines the term advertising, for the purposes of the Code it has developed, as: “[...] *a process of commercial communication, carried out for consideration by any business or other entity acting in its interest, the purpose of which is to provide consumers with information about goods and services[...]*” (Rada pro reklamu, 2022).

2.2 Outdoor advertising

Outdoor advertising (OA), also known as out-of-home (OOH) advertising can be divided into two types:

- on-premises advertising/advertising on business premises,
- off-premises advertising/outside advertising (Fullerová, 2020a).

For the sake of clarity, Table 1 lists the media

(carriers) and stakeholders for these two types of outdoor advertising.

2.3 Public space

Another important point is the definition of public space. It is the space of social life, the place where society “happens”, where communication and contact between people, exchange and inspiration take place. Currently, two basic types of public space can be distinguished, namely physical (classic public spaces, i.e. squares, streets, parks, public buildings) and virtual (remote communication via the Internet, e.g. social networks) (Buchtová, Svobodová, 2020).

The definition of public space has evolved considerably in recent decades. Physical public space includes streets (roads, pavements, cycle paths), open and green spaces (parks, squares, gardens and waterfronts) and public buildings (libraries, community or sports centres). The most fundamental questions and debates are about who owns the space and whether public space can be privately owned and still be used by the public (Kaw, Lee, Wahba, 2020).

Basically, according to Kaw, Lee, Wahba (2020), ownership and management of public space can be divided into three main groups:

1. Public ownership and management,
2. Private ownership and management,
3. Mixed ownership and management.

The Act No. 128/2000 Coll. on municipalities defines public space in § 34 as follows: “*Public spaces are all squares, streets, marketplaces, side-*

Table 1 » Outdoor advertising division

Type of outdoor advertising	Carriers	Stakeholders
On-premises advertising	company signs, stickers, light screens, shop window, menu boards, gardens and awnings etc.	salesman, marketing specialist, designer, manufacturer
Off-premises advertising	poster surfaces, rotundas, citylight showcases, banners, billboards, large-scale advertising, hypercube, rooftop advertising	sponsor, agency, manufacturer, owner of the carrier

Source: Author based on Fullerová, 2020a



- *walks, public green areas, parks and other spaces that are accessible to everyone without restriction, i.e. for general use, regardless of the ownership of the space”.*

2.4 Visual pollution

Visual pollution is the combined effect of clutter, disorder and excess of various objects and graphics in the landscape, such as outdoor advertising, street furniture, lighting elements, vegetation features and other objects (Chmielewski, 2015). Thus, visual smog refers to the infestation of public space with advertisements that destroy the uniqueness of cities and landscapes through their aggressiveness. Veronika Rút Fullerová (2020d) states that it is *“an artificial, garish panopticon that hides the true face of the city and destroys its uniqueness. To a large extent, it concerns graphic design – advertising on the premises and separate media outside the premises (outdoor advertising)”*. It is practically anything that negatively affects people’s view of public space (litter, garish colours of building facades, large and repetitive traffic signs). According to experts, visual smog negatively affects people’s living conditions and health, as well as the attention of drivers on roads and motorways. It can be discussed whenever an observer is forced to look at an advertisement (Fullerová, 2020a).

2.5 Visual smog sources

Administrative negligence, excessive advertising and vandalism can be considered as sources of visual smog (Enache, Morozan, Purice, 2012). Underdeveloped methods of quantifying visual smog appear to be a problem. This is taken as a real problem among marketing professionals, landscape designers, urban planners and public health experts. It is a problem from both the advertiser’s and the consumer’s perspective (design, tolerance, information absorption, etc.). Therefore, it is not discussed in cities that require measurable evidence for decision-making (Chmielewski, 2015).

Mačas (2021) believes that visual smog has three causes. The first is that the cluttering of public space is deliberate in the marketing strategy of companies; marketers do not try to match advertising with the environment. Next, he states that marketers themselves do not know how to match advertising with the environment, and the third cause is the ignorance of marketers themselves, who cause visual smog. In many cases, strategies and campaigns are created remotely and they often think of the environment where a given advertisement is to occur as something neutral, not considering the specifics of a particular environment and setting it in a general non-specific environment (Mačas, 2021).

For individual public space objects, it is important to determine whether they should be considered as visual pollution objects (VPO). Whether or not they should be included can be determined by the extent to which they meet the criteria below:

- visually intrusive or a nuisance to passers-by,
- inconsistency within the existing urban environment,
- inappropriate size of the surroundings (size, location)
- conflict with principles of beauty, safety and psychological or mental health,
- obstruction of the normal tasks of urban life,
- potential to threaten public safety,
- display of indecent content (Nawaz, Wakil, 2022, p. 13).

Sources of visual smog (VPO) can be divided into ten main groups:

1. outdoor advertising,
2. graffiti or chalking on walls,
3. open dumping of solid waste,
4. overflowing sewers or drains,
5. architecturally unsound buildings,
6. dilapidated buildings,
7. encroachments (temporary and permanent)
8. various poles and transformers,
9. dangling and opaque wires,
10. broken roads or ditches (Nawaz, Wakil, 2022, p. 16–17).

2.6 Problems associated with visual smog

The following are the biggest problems associated with visual smog:

- it cannot be avoided – there is no way to choose what one sees when walking through a public space,
- harms business in the city – visual smog is not necessary for a successful business, most companies use outdoor advertising, it is usually unregulated and no one stands out with their advertising,
- distorts values – it is advertising that comes to the fore, not architecture or nature, which are often obscured by the media,
- poses a safety hazard – the various carriers often obstruct pedestrians' vision, distract drivers from driving and following traffic lights, signs and other road users,
- destroys the distinctiveness of a place – historic and modern places are not primarily built or constructed with advertising, generic repetitive motifs that do not look at the locality, and signs of various colours and shapes often cover entire houses (Fullerová, 2020d).

Advertising doesn't have to be added to a building after the fact, it can be part of the building's design by the architect. This was the case, for example, with the OXO Tower in London. The tower was completed in 1929, when Thames-side logo regulations were already in place, which architect Albert Moore circumvented by 'accidentally' incorporating the product name into the stained glass windows. These were the famous Oxo beef cubes of the Liebig Extract of Meat Company, which acquired the site in 1920 to convert the building into a cold store (Harrow-Smith, 2021).

Kinterova's (2020) perspective is certainly interesting, contrasting outdoor advertising with the basic human ability and need to read and perceive things around us as something that cannot be switched off. Public space and the visual smog within it can be compared to a situation where one

hears several voices at once, for example in a hallucination, and it is difficult to defend oneself against these 'voices'. According to Kinterova (2020), it cannot be excluded that the occurrence of various psychological problems (ADHD, depression) may be related to the overloading of public space with advertising (Patrovský, 2020).

In a way, a kind of frustration with inaction and inability to address the situation can be problematic. Almost every advertising device is dealt with by a different regulation, a different law, or a different government body. Honest citizens who try to make their way through the confusing array of regulations, decrees and recommendations can see how the law can be circumvented and how the situation is, in most cases, rather unresolved. On the other hand, it is also a frustration for officials who would like to solve the situation but have only limited powers by law (Drápalová, 2020).

2.7 How to assess visual smog and advertising

It is clear from the above that assessing both advertising and visual smog itself is highly problematic. They can be evaluated, for example:

- aesthetically – a subjective matter, according to individual taste,
- content – the volume of text, some have little text to attract attention,
- physically – size, colour value, shape,
- safety – height of placement, interference with the driver's field of vision in the case of a billboard,
- functionally – legibility, typography according to technical standards,
- effectively and economically – effectiveness of the message, economic burden and return,
- contextually – fitting into the context of the place (Fullerová, 2020c),
- environmentally – the impact of companies and their individual advertising campaigns on the environment, e.g., ESG ratings tracking the company's environmental impact, its approach →

→ to society and stakeholders, and the transparency of the company’s communications (Asociace společenské odpovědnosti, 2023).

Visual smog can also be measured by eye-tracking or eye-tracking glasses. With them it is possible to collect quantitative data on the functioning of the brain and the data obtained are used in so-called neuro-marketing. Eye-tracking glasses allow one to analyse how a person perceives visual reality in a real environment (Soběhart, 2023). Eye-tracking glasses are placed directly on the respondent’s head and are used in dynamic situations – driving or moving in space. The eye movement called fixation is tracked, i.e. the moment when the eye focuses on one place (Mokrý, 2020). The result tends to be clusters of fixations depicted by a Heat Map. Where multiple fixations have been recorded, coloured spots are produced, going from green (small

amount of fixations) to red (large amount of fixations) (Jedlička, 2014).

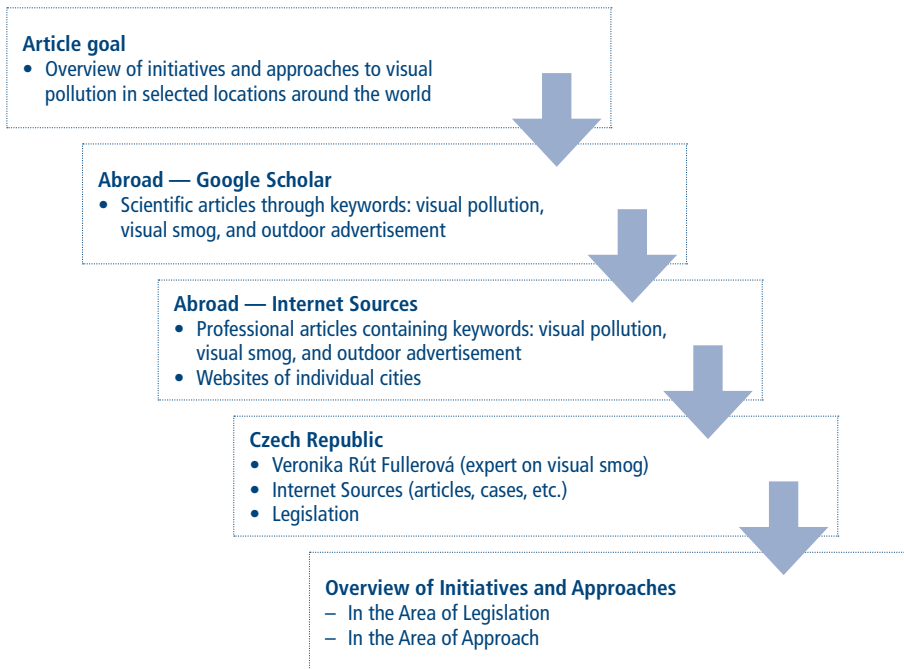
Street View can be used to determine the amount of visual smog and advertising. Simply sit down at a computer and use Google Street View to ‘walk’ through areas of interest and see where advertising is located in different years or seasons (Fullerová, 2022).

3. Methodology

Due to the complexity of the issue and the diversity of legislation in different countries, for some countries only selected cities are mentioned where information on legislation and approaches to visual smog and outdoor advertising could be found.

The aim of this paper was to provide an overview of initiatives and approaches to visual smog

Figure 1 » Diagram of the research conducted



Source: Author

in selected locations around the world. In order to achieve this objective, a content analysis of relevant sources on the topic was carried out, the flow of which is shown in Figure 1. It shows a flowchart of the research, representing the sources of information used for the research. These are mainly articles from the Google Scholar database, but also scholarly articles from web portals dealing with this area were used.

It was not possible to find a complete legislative overview in all countries, so sources were taken into account that only contained information on individual cities in the selected country and how they deal with visual smog. Three sources of information were central to the article:

- scientific articles from the Google Scholar database,
- expert articles from web portals dealing with visual smog,
- other internet sources dealing with this issue (e.g. legislative regulations, city websites, citizen initiatives).

Information has been gathered on locations from 7 countries (USA, Brazil, Australia, Israel, France, Poland and Slovakia) and the Czech Republic in order to create an overview on the perception and solutions to visual pollution and outdoor advertising. The countries were based on peer-reviewed articles. A content analysis was conducted for each source, looking for specific information on visual smog and outdoor advertising. The results are elaborated in more detail in the chapters below.

Initially, the Google Scholar database was utilized, where scholarly articles were searched based on the keywords 'visual pollution', 'visual smog', and 'outdoor advertisement'. Key articles include:

- Wilson, R. T. and Casper, J. (2016): The role of location and visual saliency in capturing attention to outdoor advertising: How location attributes increase the likelihood for a driver to notice a billboard ad.
- Wilson, R. T. (2022): Out-of-home advertising: A systematic review and Research Agenda.

- Wilson, R. T. (2023): Out-of-home advertising: A bibliometric review.
- Wakil, K et al. (2021): Mitigating Urban Visual Pollution through a Multistakeholder Spatial Decision Support System to Optimize Location-al Potential of Billboards.
- Madleňák, R. and Hudák, M. (2016): The Research of Driver Distraction by Visual Smog on Selected Road Stretch in Slovakia.
- Gitelman, V., Doveh, E. and Zadiel, D. (2019): An examination of billboard impacts on crashes on a suburban highway: Comparing three periods — Billboards present, removed, and restored. *Traffic Injury Prevention*.

In addition, the same keywords were searched on standard internet browsers and location-specific websites for further information on the issue. Based on this research, certain countries and cities were selected where more information on visual smog and outdoor advertising could be found, namely: the USA, Brazil (São Paulo), Australia (Canberra), Israel (Tel Aviv), France (Grenoble, Lille and Paris), Poland (Lublin, Gdańsk and Warsaw) and Slovakia (Bratislava and Žilina). In the course of researching various articles, it was found that artists and designers are also interested in the issue, so the projects of three of them are mentioned.

For the Czech Republic, information from the visual smog expert, Veronika Rút Fullerová, and her findings so far, especially on the website <http://vizualnismog.info>, was mainly used. It was also drawn from other articles on the internet and in legislation.

4. Results for selected countries

Advertising and visual smog itself is a hot topic all over the world. In 2019, a compendium (brief overview) of 21 recent studies from 2008 to 2018 from a wide range of countries (USA, England, Norway, Australia, Israel, Saudi Arabia, Canada, Sweden, Denmark and Belgium) on driver distraction through advertising media was published. Al-

→ though different methodologies and approaches have been used in each study, the conclusions agree that advertisements pose a threat to road safety (Wachtel, 2018).

For the following chapter, sites were selected from the USA, Brazil, Australia, Israel, France, Poland and Slovakia, and their methods of regulating and addressing the issue were described. The research carried out so far in the area under study is also presented.

4.1 USA

Since 1968, the states of Maine, Hawaii, Vermont and Alaska have regulated visual smog by banning billboards altogether. In Vermont in particular, towns have a relatively free hand in how they further regulate advertising. This can be done, for example, by only allowing signs that are smaller than billboards and that highlight the character of the area or support local businesses. The carriers should be in keeping with the character of the locality, have a style and location in connection with the place and in a way promote patriotism (Fullerová, 2020b).

The national nonprofit organisation Scenic America seeks to preserve and enhance the visual character and beauty of America. They map how each state addresses laws targeting billboards. Each year, hundreds of communities across the United States push for stricter controls on billboards (Scenic America, 2023). According to research, the states with the most state-permitted billboards are estimated to be Florida (32,162), Texas (24,262), and Michigan (23,144); the states with the fewest billboards are Washington, DC (86), Rhode Island (391), and New Hampshire (893); and the states with no billboards are Alaska, Hawaii, Maine, and Vermont (Scenic America, 2021).

Research from 2016 looked at the importance of billboard placement and visual salience (the ability of an ad to stand out and grab attention through the use of colour, shading and compositional de-

sign) in capturing consumer attention. As a result, it was found through eye-tracking and established hypotheses that how billboards look visually has some limited influence on drivers' attention (Wilson, Casper, 2016).

4.2 Brazil

In the city of São Paulo, a mutual agreement was reached in 2007 between the city and advertising operators to ban all outdoor advertising, as it is very difficult to control the ever-increasing number of advertisements, and very strictly limit advertising on business premises. Already in 2007, under the Clean City Law, 15,000 billboards and 300,000 excessive signboards were removed in the city. Five years after the law was passed, the city gradually began to allow advertising, but it was very tightly regulated and advertising became much more organized. Furthermore, the city government entered into a 25-year contract with JCDecaux, under which the company is responsible for the maintenance, design, and marketing of the advertising dials on the 1,000 digital clocks (Mahdawi, 2015).

4.3 Australia

The Australian capital city of Canberra has had an ordinance relating to roads and other public places since 1937, which has banned billboards except for those placed on cars as mobiles and advertisements placed at public transport stops. The appearance of billboards has never been permitted again for the reason that billboards were not considered during the planning of what the city would look like and therefore the emphasis is primarily on unobstructed views in large spaces. It was not until the end of the twentieth century that it was necessary to initiate the formation of an Ad Removal Committee because of the increased prevalence of advertising devices, especially on private property. Ian McAuley justifies the initiative to form this committee as follows: "We want to pre-

serve our public space... It belongs to us, not to corporations.” (Fettes, 2017).

4.4 Israel

A study from 2014, complementing a study from 2010, examined the impact of billboards on accidents on a busy highway in Tel Aviv. It was a comparison of three situations – the current situation, the removal/coverage of billboards and the reinstatement of billboards. To avoid inconclusive results, the billboards were left uncovered in some sections. Where billboards were removed, the number of injury crashes decreased by 30 to 40%. When billboards were reinstated, the number of injury crashes increased by 40 to 50%. As a result, covering the billboards resulted in a 60% decrease in all crashes (Gitelman, Doveh, Zaidel, 2019).

4.5 France

It was in France, in Grenoble, that outdoor advertising was banned as the first country in Europe. In 2014, 326 carriers were removed and replaced by trees or public signboards. The city lost £105,000 as a result, which it reportedly compensated for by cutting some expenses. However as the contract with JCDecaux was not due to expire until 2019, Grenoble residents did not notice the change (Mahdawi, 2015).

In the northern French city of Lille and Paris, demonstrations against excessive advertising took place from 2017 to 2019. In 2018, more than 1 600 advertising signs disappeared from the streets of Paris, but since no one noticed the absence of the signs, they started to return after a year and a half. A petition by the group Greenpeace Paris called on the city to ensure that there would be no more commercial video screens in the future (Chrisafis, 2019). The petition lists 10 reasons not to support commercial video screens, such as excessive energy consumption, incompatibility with the Parisian environment, wasteful use of electricity, toxicity of blue light, creation of light smog, and difficulty in

recycling these devices. In response to the petition, the city hall stated that its policy was not to develop any more advertising in the city, that the carriers had been reduced and that some of the city’s furniture had been handed over to the city news (Chrisafis, 2019).

4.6 Poland

In 2015, the Landscape Act was passed, giving powers to local authorities to combat visual smog. Along with this law, 10 other laws were amended, where the changes made concerned advertisements in public space (Szczepińska. 2020).

In 2015, field research, visibility analysis and subsequently 1 000 questionnaires were conducted in Lublin. The author argues that visual pollution can be quantified in a meaningful way that also captures public opinion. Several methods were combined and the authors believe that visibility analysis can help Lublin’s planning officials as a tool for assessing and reducing visual pollution based on direct evidence from surveys (Chmielewski et al, 2015).

The Polish city of Gdansk is not lagging behind either, where a two-year transition period ended in 2020, during which owners of advertisements and billboards had to adapt to the new regulations. As a result of a very comprehensive regulation, many illegal media disappeared from the city, but unfortunately not all (Bialas, 2020). The regulations aim to establish clear, democratic rules for the placement of advertisements or billboards, thus improving the common space and the overall image of the city. It is a kind of instruction manual that states what, how and where can be placed in the city so that similar areas have the same rules for placing advertising media and the unique character of the place is preserved (Adamowicz, 2018).

Research from 2022 examined public opinion on the introduction of new outdoor advertising regulations in Warsaw. More than 80% of respondents said they agreed with the introduction of new regulations and more than 60% agreed that some

→ form of outdoor advertising in public spaces is needed. Respondents are willing to pay 15 to 23 EUR per year for a programme to limit outdoor advertising and also confirm that advertising in the city centre and on the outskirts should be treated differently (Czajkowski et al., 2022).

4.7 Slovakia

In Slovakia, in 2014, there was talk of amending the Building Act to help remove and permit illegally placed billboards. Officials would have a freer hand, and the law would tighten the conditions under which buildings for advertising would be permitted. Furthermore, it will not be possible to legalise those installations that have been erected without the relevant permits (ČTK, 2014).

Madleňák and Hudák (2016) note that according to traffic accident statistics, the most frequent cause of traffic accidents is both improper driving and driver inattention. If the number of advertisements near the roads were halved, the time spent looking at the billboard would be reduced and the driver could pay more attention to the traffic. This would lead to safer road traffic and thus reduce the number of accidents.

An experiment was carried out on a selected section of the road in Žilina using SMI Eye Tracker Glasses (glasses to monitor a person's natural gaze), a GoPro HERO camera and an EMOTIV EPOC+ EEG (headset to measure the driver's brain activity during the experiment). Based on data from the Traffic Inspectorate in Žilina, it was known that 25 accidents occurred on the monitored section between January and September 2015, and in 15 cases the driver's inattentiveness was to blame. There were 191 advertisements on the 6.3-kilometre stretch in question, and each of the drivers who were part of the experiment looked at more than 100 of them. Long glances longer than 0.75 seconds were rated as the most dangerous glances, specifically on billboards, where glances of up to 2 seconds were common (Hudák, Madleňák, 2017).

At the beginning of April 2021, the National Council of the Slovak Republic approved a proposal to amend the Construction Act to ensure strong and fair tools to streamline the regulation of buildings for advertising. Changes in the law include, for example, the possibility for municipalities to initiate the removal of illegal buildings, building permits for an indefinite period will be limited to a maximum of three years, and in case of non-renewal and non-removal within 30 days, the owner will be fined 1,350 euros (ZMOS, 2021).

In Bratislava, in 2021, rules were introduced into the zoning plan that no longer allow an advertising structure to be placed without a building permit or notification (Hlavné mesto SR Bratislava, 2022). In 2022, *The Public Spaces Manual: Principles and Standards of Outdoor Advertising* was published for Bratislava, which contains a number of important pieces of advice and guidelines on how to place outdoor advertising (Metropolitný inštitút Bratislavy, 2022).

4.8 Czech Republic

Legislation on outdoor advertising in the Czech Republic is supplemented by aesthetic conditions by the Advertising Council, whose main objective is to ensure the promotion of legal, honest, truthful and decent advertising. The association was established in 1994 and currently has 18 members (Czech Television, Czech Radio, FTV Prima, Komerční banka, TV Nova, Sazka and others). It is a non-governmental organisation which operates by issuing decisions in the form of recommendations and does not impose financial penalties or other sanctions. Advertising is regulated by rules in a document called the Advertising Code and is a form of self-regulation. A year after its creation, the Advertising Council also became a member of the European Association of Self-Regulatory Bodies (EASA) (Vysekalová, Mikeš, 2018; Rada pro reklamu, 2022).

As such, advertising law is currently not a separate branch of law; it is more or less a combination

of both private and public law norms. It is the very diversity of products and forms of advertising that causes the diversity of advertising law (Rigel et al., 2018). They also list about 26 regulations and directives from European Union law and over 50 legal regulations in the Czech Republic as the most important.

The basis for regulation is contained in Act No. 40/1995 Sb., on the Regulation of Advertising, as amended. The Act states that advertising must not be based on subliminal perception, must not be contrary to good morals, and that outdoor advertising is prohibited from promoting behaviour that harms health or endangers the safety of persons and property.

Among the most important legal regulations for outdoor advertising, mention should be made of Act No 183/2006 Sb., the Act on Spatial Planning and Building Regulations, which replaces Act No 283/2021 Sb., the Building Act, with effect from 1 January 2024. The Building Act defines two types of carriers – advertising equipment and building for advertising. A building for advertising is a building with a surface area of more than 8 m² that is used for advertising purposes. A device with a total area of less than 0.6 m² may be installed outside the protection zones of roads without consent or decision. The placement of advertising media according to Act No 13/1997 Sb., the Act on Roads, is always authorised by the competent building authority for a maximum period of five years.

In 2012, an amendment to the law came into force and most of the advertising devices were to disappear within five years (Neusar, 2012). Thus, by 1 September 2017, more than 1,000 billboards along motorways were to be removed, and the staff of the Directorate of Roads and Motorways were to monitor, cover and gradually remove the billboards in the buffer zone (Ministerstvo dopravy, 2017). In most cases, the removal did not take place, and the amendment to the Construction Act should again allow the operators of advertising media to place them. The biggest problem is the lack of sufficient and ambiguous interpretation of

various terms in the laws and amendments, which billboard operators try to use to their advantage (Kverulant.org, 2022).

Other laws that regulate advertising in some way are:

- Act No.121/2000 Sb., on Copyright, on Rights Related to Copyright and on Amendments to Certain Acts (Copyright Act),
- Act No 128/2000 Sb., on Municipalities (Municipal Establishment),
- Act No. 565/1990 Sb., on local fees,
- Act No. 20/1987 Sb., on State Heritage Care, as amended (Heritage Act),
- Act No. 114/1992 Sb., on Nature and Landscape Protection,
- Act No. 106/1999 Sb., on free access to information, as amended, and others.

In 2016, the Ministry of Transport commissioned a study by the Transport Research Centre to investigate the impact of advertising devices on traffic safety. The study included, among other things, a search of foreign literature and the legal environment abroad (Germany, Switzerland, Austria, Sweden, the UK and the Netherlands) with advertising devices. The research carried out showed that advertisements along motorways and major roads outside the municipality are prohibited in the countries mentioned. For the actual topic of the study, data was collected using an eye-tracking system, an analysis of traffic accidents between 2010 and 2015, a forensic perspective, a traffic psychological perspective and a survey of public attitudes. The results of the study confirm that advertising devices, as secondary information carriers, attract drivers' attention, increase drivers' reaction time, and the supporting structures of advertising devices worsen the consequences of traffic accidents (CDV, 2016).

Cities in the Czech Republic are not lagging behind either, many of them have created good practice manuals that show how outdoor advertising, and not only outdoor advertising, should be handled in public space. Cities such as Brno, Prague and Ostrava have manuals (Fullerová, 2020b).



→ 4.9 Ad-free streets

Large cities around the world are in many cases crowded with giant advertising signs, billboards or LED panels. Even artists of all kinds are not indifferent to the situation. In his series “Tokyo without Ads”, French visual designer Nicolas Damiens shows how the busy streets of the Japanese capital would look without logos, slogans or company names (Azzarello, 2015). His series has been covered by various foreign websites – Japanese, Korean, English, American, French and Italian (Damiens, 2023).

Something very similar was done in 2021 by Ukrainian artist, quantitative analyst and former graphic designer Rinat Rizvanov, who similarly re-designed the Times Square space in New York. He sees advertising as something with many ethical problems, forcing on people what they don’t need. Advertising is a kind of attention-stealing and evokes negative emotions in most people (Flood, 2021).

In 2018, the Californian artist Ivan Cash together with his team of volunteers at IRL (in real life) Labs brought the so-called IRL glasses. They look and serve as classic sunglasses that also block the wavelengths of light from LED and LCD screens (Pardes, 2018; IRL Labs, 2023) As part of their projects, they are also planning signal-blocking garments or community spaces without technology (IRL Labs, 2023).

5. Discussion and suggestions for further research

The aim of the paper was to provide an overview of initiatives and approaches to visual smog in selected locations around the world. The following Table 2 provides a summary of the findings within the visual smog and outdoor advertising issues for each country and city.

The issue of advertising and visual smog is a hot topic across the world. Between 2008 and 2018,

Table 2 » Overview of the results of the analysis of relevant initiatives for each location

Countries	National legislation	Cities	Findings to date
USA	4 states — since 1968 laws banning billboards	—	Scenic America — a non-profit organization, researches to review the number of post-election billboards in each state
Brazil	not found	São Paolo	2007 — Clean City Law, removal and strict regulation
Australia	not found	Canberra	1937 — decree banning billboards along roads and other public places
Israel	not found	Tel Aviv	2014 — study, covering billboards reduced accident rates by 60%
France	not found	Grenoble Lille, Paris Paris	2014 — ban on outdoor advertising 2017 — 2019 — demonstrations against excessive advertising 2018 — The Greenpeace Paris group
Poland	2015 — Landscape Act	Lublin Gdansk Warsaw	2015 — study, methodology to help officials 2018 — rules for the placement of outdoor advertising 2022 — public opinion on OA
Slovakia	2014 — amendment to the Building Act	Bratislava Žilina	2021 — change of the zoning plan 2022 — Public Spaces Manual 2016 — OA studies and their impact on traffic safety
Czech Republic	advertising law is not a separate branch of law	Brno, Prague, Ostrava	Manuals of good practice

Source: Author

more than 20 studies have been published in various countries on driver distraction through advertising media and independently agree that advertising is a road safety hazard. Four states in the US have already passed laws banning billboards altogether in 1968, and various non-profit organisations and communities across the United States are continually pushing for stricter controls on billboards. In Brazil's largest city, São Paulo, over 300 000 billboards have already been removed in 2007 under the Clean City Law, and advertising has only been allowed under very strict restrictions. The city's management has entered into a 25-year contract with JCDecaux, which manages the 1 000 digital clocks in the city. In Australia, since 1937, there has been an ordinance prohibiting billboards on roadsides and other public places.

Even in Europe, there is no silence about advertising and visual smog. Grenoble, France, was the first European country to ban outdoor advertising in 2014. In other French cities (Lille or Paris), demonstrations against excessive advertising took place between 2017 and 2019. In Poland, a two-year period during which ad owners were to adapt to the new regulations ended in 2020. In Slovakia, talk of changing the Building Act and its relation to its impact on advertising started in 2014, and in April 2021 a proposal to amend the Building Act to provide strong and fair tools to make building regulation for advertising more effective was approved. As an example of the extent to which streets are filled with advertising, photographs of major cities around the world (Tokyo, New York) have been produced showing what streets look like now and what they would look like if there were no advertising at all or if they were replaced by white space only.

In the Czech Republic, advertising law is not a separate branch of law. Extensive and diverse legislation is supplemented by the Advertising Council on aesthetic terms. In the past decade, legislative change in relation to outdoor advertising has been addressed, but so far no groundbreaking results have been seen in practice. Compared to other

states, there has not been a significant decline in advertising media or the introduction of clear legislative rules. Several cities (Brno, Prague and Ostrava) have developed manuals of good practice for working not only with outdoor advertising.

Outdoor advertising contributes significantly to the visual pollution of cities. In many underdeveloped economies, a complete ban on billboards is not an affordable option. Billboards and banners are a significant source of revenue for advertising agencies and advertisers. Managing billboards in city centres is difficult because of the conflicting demands of different interest groups (Wakil et al., 2021).

Abroad, changes concerning the placement of advertising media are often incorporated directly into legislation. In addition, eye-tracking glasses are also widely used, and it would therefore be appropriate to use this technology in further research.

Firms' investment in advertising is still on an upward trend (Saiver, 2022). Further research is needed to look more closely at this issue, especially to look at the economics and return on firms' investment in advertising. Whether it is worthwhile for companies to invest a lot of money nowadays in mediums that cause a lot of problems and increase visual pollution when the current trends in marketing are focused on digital marketing, influencer marketing or AI (Patel, 2023). The findings could extend the theory and help businesses create more effective marketing strategies.

6. *Limits of the study*

A major limitation of the research for this article is the lack of research on the issue as such. This is mainly due to the multidisciplinary nature of the topic, as Wilson (2022, 2023) mentions in his articles. It is necessary to explore the issue in more depth in the already mentioned or other countries and cities in relation to their culture, rules and customs. The field of visual smog research is still not sufficiently explored. Therefore, further iterative

- research is needed to understand this area in more depth.

7. Conclusions

The aim of this paper was to provide an overview of initiatives and approaches to visual smog in selected locations around the world. In some countries or cities, specific rules have already been established regarding outdoor advertising and the reduction of visual smog. In some cases, specific legislation has also been adopted. This is thanks to people who care about how the world looks around them. Unlike in other countries, visual smog in the

Czech Republic is also being addressed outside academia. In the Czech Republic, there are no scientific articles on the subject. Abroad, it is standard practice to include bans on outdoor advertising in laws or ordinances that help to reduce visual smog.

There are several sources of visual smog; it cannot be avoided and it distorts values, be it architecture or nature. The fact that advertising media distract drivers or obstruct pedestrians' vision, thereby jeopardising road safety, is also fundamental. Raising awareness of the issue and setting clear rules on the placement of advertising media in public spaces could reduce the amount of visual smog and encourage honest business.

The first is that the cluttering of public space is deliberate in the marketing strategy of companies; marketers do not try to match advertising with the environment. Next, he states that marketers themselves do not know how to match advertising with the environment, and the third cause is the ignorance of marketers themselves, who cause visual smog. In many cases, strategies and campaigns are created remotely and they often think of the environment where a given advertisement is to occur as something neutral, not considering the specifics of a particular environment and setting it in a general non-specific environment.

RESOURCES

- [1] ADAMOWICZ, P. 2018. Czym jest uchwała krajobrazowa gdańska? *Uchwała Krajobrazowa Gdańska*. [online]. [cit. 2023-03-10]. Available at: <http://www.uchwalakrajobrazowagdanska.pl/uchwala-krajobrazowa-gdanska/czym-jest-uchwala-krajobrazowa-gdanska/>
- [2] ASOCIACE SPOLEČENSKÉ ODPOVĚDNOSTI. 2023. *ESG rating 2022: Jak si vedou české firmy v udržitelnosti?* [online]. [cit. 2024-01-11]. Available at: <https://www.spolecenskaodpovednost.cz/esg-rating-2022-jak-si-vedou-ceske-firmy-v-udrzitelnosti/>
- [3] AZZARELLO, N. 2015. *Nicolas Damiens envisions Tokyo without ads*. [online]. [cit. 2023-04-01]. <https://www.designboom.com/art/nicolas-damiens-envisions-tokyo-without-ads-02-09-2015>
- [4] BIAŁAS, K. 2020. Uchwała krajobrazowa w Gdańsku Działa! Z miasta znikają szpetne szyldy. *Magazyn WhiteMAD – moda, architektura, design w jednym miejscu*. [online]. [cit. 2023-03-10]. Available at: <https://www.whitemad.pl/uchwala-krajobrazowa-w-gdanskku-dziala-z-miasta-znikaja-szpetne-szyldy/>
- [5] BUCHTOVÁ, V., SVOBODOVÁ E. 2020. TÉMA: Knihovna ve veřejném prostoru 2: Knihovna ve veřejném prostoru – veřejný prostor v knihovně. *Čtenář – Měsíčník pro Knihovny*. [online]. [cit. 2022-12-20]. Available at: <https://svkkl.cz/ctenar/clanek/3141>

- [6] CENTRUM DOPRAVNÍHO VÝZKUMU (CDV). 2016. *Nebezpečí billboardů u silnic*. [online]. [cit. 2023-03-01]. Available at: <https://www.cdv.cz/nebezpeci-billboardu-u-silnic/>
- [7] CHMIELESKI, S. et al. 2015. Measuring visual pollution by outdoor advertisements in an urban street using intervisibility analysis and public surveys, *International Journal of Geographical Information Science*, 30(4), 801–818. 10.1080/13658816.2015.1104316
- [8] CHRISAFIS, A. 2019. Advertising breaks your spirit: The French cities trying to ban public adverts. *The Guardian*. [online]. [cit. 2023-03-10]. Available at: <https://www.theguardian.com/cities/2019/dec/23/advertising-breaks-your-spirit-the-french-cities-trying-to-ban-public-adverts>
- [9] CZAJKOWSKI, M. et al. 2022. Valuing externalities of outdoor advertising in an urban setting – the case of Warsaw. *Journal of Urban Economics*, 130, 1–14. 10.1016/j.jue.2022.103452
- [10] ČTK. 2014. Slovensko chce zákonem omezit záplavu billboard. *Deník.cz*. [online]. [cit. 2023-03-01]. Available at: https://www.denik.cz/ze_sвета/slovensko-chce-zakonem-omezit-zaplavu-billboardu-20140716.html
- [11] DAMIENS, N. 2023. *Awards & publications*. [online]. [cit. 2023-03-28]. Available at: <http://www.nicolasdamiens.com/awards/>
- [12] DRÁPALOVÁ, K. 2020. Vizuální smog jako projev krize veřejné správy. *ERA21*. [online]. [cit. 2023-02-10]. Available at: <https://www.era21.cz/cs/clanky/clanky/2020-11-03-vizualni-smog-jako-projev-krize-verejne-spravy/>
- [13] ENACHE, E., MOROZAN, C., PURICE, S. 2012. Visual pollution: A new axiological dimension of marketing? *Annals of Faculty of Economics*, University of Oradea, 1(2), 820–826.
- [14] FETTES, J. 2017. Why does Canberra have so few billboards? Why doesn't Canberra have billboard advertising? *ABC News*. [online]. [cit. 2023-03-01]. Available at: <https://www.abc.net.au/news/specials/curious-canberra/2017-06-19/why-doesnt-canberra-have-billboard-advertising/8622186>
- [15] FLOOD, R. 2021. This is what Times Square would look like without any adverts. *Newsweek digital*. [online]. [cit. 2023-03-28]. Available at: <https://www.newsweek.com/times-square-new-york-no-adverts-look-like-1659639>
- [16] FORET, M. 2003. *Marketingová komunikace: získání pozornosti zákazníků a naplnění jejich očekávání*. Brno: Computer Press.
- [17] FULLEROVÁ, V. R. 2020a. Dělení reklam ve veřejném prostoru. *Vizuální smog*. [online]. [cit. 2022-12-21]. Available at: <http://vizualnismog.info/deleni-reklam-ve-verejnem-prostoru/>
- [18] FULLEROVÁ, V. R. 2020b. Regulace reklam – příklady a legislative. *Vizuální smog*. [online]. [cit. 2022-12-21]. Available at: <http://vizualnismog.info/regulace-reklam/>
- [19] FULLEROVÁ, V. R. 2020c. Jak hodnotit reklamu a vizuální smog. *Vizuální smog*. [online]. [cit. 2022-12-20]. Available at: <https://vizualnismog.info/jak-hodnotit-reklamu-a-vizualni-smog/>
- [20] FULLEROVÁ, V. R. 2020d. Vizuální smog je zamoření veřejného prostoru agresivní reklamou, která zastírá jedinečnost měst i krajiny. *Vizuální smog*. [online]. [cit. 2022-12-20]. Available at: <http://vizualnismog.info/>
- [21] FULLEROVÁ, V. R. 2022. *Dotaz na téma vizuální smog*. [e-mail]. [cit. 2022-12-20].
- [22] GITELMAN, V., DOVEH, E., ZAIDEL, D. 2019. An examination of billboard impacts on crashes on a suburban highway: Comparing three periods – billboards present, removed, and restored. *Traffic Injury Prevention*, 20(2), S69–S74. 10.1080/15389588.2019.1645330
- [23] HARROW-SMITH, T. 2021. *All about oxo – digging up the story of a south bank icon*. South Bank London.
- [24] HLAVNÉ MESTO SR BRATISLAVA. 2022. *Mestské zastupiteľstvo schválilo v rámci zmien a doplnkov* →

- územného plánu novú reguláciu reklamných stavieb. [online]. [cit. 2023-10-05]. Available at: <https://bratislava.sk/blog/mestske-zastupitelstvo-schvalilo-v-ramci-zmien-a-doplňkov-uzemneho-planu-novu-regulaciu-reklamnych-stavieb>
- [25] HUDÁK, M., MADLEŇÁK, R. 2017. The research of driver distraction by visual smog on selected road stretch in Slovakia. *Procedia Engineering*, 178, 472–479. 10.1016/j.proeng.2017.01.090
- [26] IRL LABS. 2023. *IRL Labs empowers people to unplug and be more present with themselves, others, and the world around them.* [online]. [cit. 2023-04-01]. Available at: <https://www.irl-labs.co/#join>
- [27] JEDLIČKA, L. 2014. *Základní úvod do eye trackingu.* Výzkumná laboratoř Eye Trackingu Ostravské univerzity v Ostravě. [online]. [cit. 2023-03-01]. Available at: <https://vlet.osu.cz/e-tracking.htm>
- [28] KAW, K., LEE, H., WAHBA, S. 2020. *The hidden wealth of cities: Creating, financing, and managing public spaces.* Washington: World Bank Group.
- [29] KINTEROVÁ, M. 2020. *Kam oči, tam hlava.* Praha: Nakladatelství Akademie múzických umění.
- [30] KVERULANT.ORG. 2022. *Nový stavební zákon by mohl vrátit billboardy k dálnicím a silnicím.* [online]. [cit. 2022-12-25]. Available at: <https://www.kverulant.org/article/novy-stavebni-zakon-by-mohl-vratil-billboardy-k-dalnicim-a-silnicim/>
- [31] MAČAS, M. 2021. Reklama jako vizuální smog: Můžeme to napravit? *eVisions.cz.* [online]. [cit. 2023-02-20]. Available at: <https://www.evisions.cz/blog-2021-09-22-reklama-jako-vizualni-smog-muzeme-to-napravit/>
- [32] MADLEŇÁK, R., HUDÁK, M. (2016): The research of visual pollution of road infrastructure in Slovakia. In *Communications in Computer and Information Science*, 415–425. 10.1007/978-3-319-49646-7_35
- [33] MAHDAWI, A. 2015. Can cities kick ads? Inside the global movement to ban urban billboards. *The Guardian.* [online]. [cit. 2023-03-10]. Available at: <https://www.theguardian.com/cities/2015/aug/11/can-cities-kick-ads-ban-urban-billboards>
- [34] METROPOLITNÝ INŠTITÚT BRATISLAVY. 2022. *Manuál verejných priestorov: Princípy a štandardy vonkajšej reklamy.* [online]. [cit. 2023-10-10]. Available at: https://mib.sk/wp-content/uploads/2022/05/MIB_Principy_a_standardy_vonkajsej-reklamy_v-1_01.pdf
- [35] MINISTERSTVO DOPRAVY. 2017. *Ministerstvo dopravy naplní zákon, ktorý od září zakazuje billboardy v ochranném pásmu dálnic.* [online]. [cit. 2022-12-25]. Available at: <https://www.mdcr.cz/Media/Media-a-tiskove-zpravy/billboardy>
- [36] MOKRÝ, S. 2020. *Eye-tracking a jeho praktické využití v oblasti designu.* [online]. [cit. 2023-03-01]. Available at: <https://casopis-interiery.cz/eye-tracking-a-jeho-prakticke-vyuziti-v-oblasti-designu/>
- [37] NAWAZ, R., WAKIL, K. 2022. *Visual pollution: Concepts, practices and management framework.* Bingley: Emerald Publishing Limited.
- [38] NEUSAR, Z. 2012. *Novela zákona o pozemních komunikacích: přísnější kritéria pro billboardy.* [online]. [cit. 2022-12-25]. Available at: <https://ekolist.cz/cz/zpravodajstvi/tiskove-zpravy/novela-zakona-o-pozemnich-komunikacich-prisnejsi-kriteria-pro-billboardy>
- [39] PARDES, A. 2018. *These magical sunglasses block all the screens around you.* [online]. [cit. 2023-04-05]. Available at: <https://www.wired.com/story/irl-glasses-screen-blocking>
- [40] PATEL, L. 2023. Council post: 10 marketing trends that will dominate in 2024. *Forbes.* [online]. [cit. 2024-01-05]. Available at: <https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2023/12/18/10-marketing-trends-that-will-dominate-in-2024/>
- [41] PATROVSKÝ, O. 2020. *Vizuální smog může mít špatný vliv na psychiku. Částečně zijeme v halucinaci, tvrdí umělkyně.* ČT24. [online]. [cit. 2023-02-10]. Available at: <https://ct24.ceskatelevize.cz/kultura/3051384-vizualni-smog-muze-mit-spatny-vliv-na-psychiku-castecne-zijeme-v-halucinaci-tvrdi>

- [42] RADA PRO REKLAMU. 2022. *Rada pro reklamu*. [online]. [cit. 2022-12-25]. Available at: <https://www.rpr.cz/cz/profil.php>
- [43] RIGEL, F., MORAVEC, O., ONDREJOVÁ, D. 2018. *Reklamní právo*. Praha: C.H. Beck.
- [44] SAIVER, F. 2022. Investice do Reklamy Dosáhly V Česku 125 miliard. Kdo utratil nejvíce? *Forbes*. [online]. [cit. 2024-05-05]. Available at: <https://forbes.cz/investice-do-reklamy-dosahly-v-cesku-125-miliard-kdo-utratil-nejvice/>
- [45] SCENIC AMERICA. 2023. *About us*. [online]. [cit. 2023-03-01]. Available at: <https://www.scenic.org/about-us/>
- [46] SCENIC AMERICA. 2021. *Total billboard faces per state*. [online]. [cit. 2023-03-01]. Available at: <https://www.scenic.org/sign-control/billboard-facts-by-state/total-billboard-faces-by-state/>
- [47] SOBĚHART, R. 2023. *Laboratoře Behaviorálních studií*. UJEP. [online]. [cit. 2023-03-01]. Available at: <https://pribeh.ujep.cz/project/laboratore-behavioralnich-studii/>
- [48] SZCZEPIŃSKA, A. 2020. *Ustawa krajobrazowa – nowe narzędzia w rękach samorządów a prawa przedsiębiorców*. [online]. [cit. 2023-10-13]. Available at: <https://kruczek.pl/ustawa-krajobrazowa/>
- [49] VYSEKALOVÁ, J., MIKEŠ J. 2018. *Reklama: jak dělat reklamu*. 4. aktualizované a doplněné vydání. Praha: Grada Publishing.
- [50] WACHTEL, J. 2018. *Compendium of recent research studies on distraction from commercial electronic variable message signs (CEVMS)*. Veridian Group. [online]. [cit. 2023-03-10]. Available at: <https://www.scenic.org/wp-content/uploads/2019/09/billboard-safety-study-compendium-updated-february-2018.pdf>
- [51] WAKIL, K. et al. 2021. Mitigating urban visual pollution through a multistakeholder spatial decision support system to optimize locational potential of billboards. *International Journal of Geo-Information*, 10(2), 1–21. 10.3390/ijgi10020060
- [52] WILSON, R.T., CASPER, J. 2016. The role of location and visual saliency in capturing attention to outdoor advertising: How location attributes increase the likelihood for a driver to notice a billboard ad. *Journal of Advertising Research*, 56(3), 259–273. 10.2501/JAR-2016-020
- [53] WILSON, R.T. 2022. Out-of-home advertising: A systematic review and research agenda. *Journal of Advertising*, 52(2), 279–299. 10.1080/00913367.2022.2064378
- [54] WILSON, R.T. 2023. Out-of-home advertising: A bibliometric review. *International Journal of Advertising*, 43(2), 1–35. 10.1080/02650487.2023.2186013
- [55] ZDRUŽENIE MIEST A OBCÍ SLOVENSKA (ZMOS). 2021. *Parlament schválil právnu úpravu k vizuálnemu smogu*. [online]. [cit. 2023-03-01]. Available at: <https://www.zmos.sk/oznamy/parlament-schvalil-pravnu-upravu-k-vizualnemu-smogu-.html>

Overview of visual smog initiatives in selected locations around the world

ABSTRACT

Due to their multidisciplinary potential and central role in various campaigns, visual pollution and outdoor or out-of-home (OOH) advertising have received considerable interest from scholars and practitioners. In the Czech Republic, visual pollution and OOH advertising have come to the forefront of politicians' and business leaders' concerns, and several citizen initiatives have emerged to combat illegal advertising that pollutes public space. The aim of this paper is to provide an overview of initiatives and approaches to visual smog in selected locations around the world. The fundamentals of distinguishing types of outdoor advertising and the methods for assessing visual pollution will be presented.



→ **KEYWORDS**

advertising; out-of-home advertising; outdoor advertising; visual pollution; visual smog

JEL CLASSIFICATION

M31; M37

