

Matej Majerský, Viera Kačínová

How Does the Media Communicate Information about Climate Change? Analysis of Slovak Mainstream Media in 2019-2024

DOI: <https://doi.org/10.34135/mlar-24-02-03>

ABSTRACT

Climate change is one of the biggest global issues and challenges facing society today. The media reflect this topic in their content, but it often fades into the background in terms of the importance of other events. However, the diversity of this topic does not stop at the issue of waste management or waste reduction. Climate change and related topics can be found in content that focuses on politics, economics, energy or culture. Certain social events can add important journalistic value to the topic in order to attract both journalists and audiences and thus make it into mainstream content. This study aims to explore how the communication of climate change in the Slovak mainstream media has evolved over the last five years. As part of a quantitative content analysis, using keyword searches via a media monitoring application, we will examine Slovak print, online and television content between 2019 and 2024 – this period captures the global events of the COVID-19 virus pandemic and the Russia-Ukraine war.

KEY WORDS

Climate Change. Earth Day. Earth Overshoot Day. Global Events. Media Coverage. Setting of Agenda. Slovak Mainstream Media. World Environment Day.

1 Introduction

Apart from experiencing the world around us through sensory perception, it can be claimed that we understand the world purely through mass media. Many theorists agree that claims about the media being all around us are already inaccurate and that we should rather say that we ourselves live in the media. M. Deuze begins his publication *Media Life* (2015) with the claim that we live “inside the media”. According to D. McQuail and M. Deuze (2020), in turn, our minds are full of information and impressions gained from the media. We live in a world saturated with the sounds and images of the media, where politics, government and business operate on the assumption that we know what is going on in the world. N. Carah, in the introduction to his publication *Media & Society: Power, Platforms, & Participation* (2021), says that media operate on the principle of social processes, transmitting meanings. These are the meanings that shape our understanding of the world around us and our attitudes towards particular elements of reality. He highlights the importance of this process as he declares that how we understand the world determines how we behave in it. It is the saturation of our lives with the media and the fact that it explains to us issues that affect us that is, in our opinion, a very important factor influencing the development and behavior of society.

Of course, it is impossible to ignore the fact that there are other ways of understanding different realities, which are of a micro-social or interpersonal nature (in the context of family, kinship or neighborhood communication), or also of a macrosocial impact (e.g. through a public lecture). However, these often work again with the mass media as a source of information, which thus acquires an almost monopolistic character in this sense. This is especially true for global topics, among which we include the topic of climate change.

Even though we can already see some of its manifestations around the world, or in our immediate surroundings, it is virtually impossible to perceive its global impact without the media. Since people learn about the phenomenon of climate change from the media (Sachsman & Myer Valenti, 2020), as well as about its causes, consequences but also individual actions that could slow down its impact, the task of correctly and thoroughly interpreting this topic is in the hands of journalists.

2 The Current Challenges of Communicating Climate Change

Communication on the issue of climate is difficult for several reasons. First of all, we can point to the complexity and intricacy of the topic, which is very complicated to process into comprehensible media content. This may also be related to the fact that the phenomenon of climate change is still largely abstract. Unlike many other topics, the topic of climate change is rather bland. It is a specific scientific field that is not easily understood by the average person. When reporting on climate change, media content writers present complex data and information of a scientific nature. Moreover, the recipient may not be motivated to want to understand such texts, as we assume that the significant social impacts that humanity will face during the climate crisis are a matter for the future (Sachsman & Myer Valenti, 2020 ; Krajčovič et al., 2023). Content that presents this issue often falls into the sub-genre of environmental journalism. This is the type of media production that comes closest to reporting on climate change. According to the World Wildlife Fund for Nature (WWF), environmental journalism creators should educate and inform the public about the serious state of the environment and use the power of the media to raise awareness about the changes needed to improve air and water quality, protect wildlife, and also conserve natural resources (World Wide Fund for Nature, 2009). G. Mocatta, as per her argument, defines environmental journalism as: “an extremely multifaceted and complex genre of journalism that covers a wide range of socio-political, technical and natural

phenomena” (2015, p. 12). However, the topic of climate change is only one of many themes that can be classified under environmental journalism. In the same way, climate change brings together a wide range of subjects under its own label. Based on a study by the Department of Communication and Media Research at the University of Zurich, we can classify topics that directly relate to climate change into three dimensions – the Societal Dimension, the Ecological Dimension, and the Scientific Dimension. According to the research group, the media most often touch on the Societal Dimension – with the causes of climate change and possible solutions being the most frequently discussed issue. Among many topics, one can mention those such as clean energy, energy efficiency, oil extraction, greenhouse gases, carbon capture, infrastructure and transport, personal transportation and cars, sustainable consumption, environmental policy, COPs, education for sustainable development, agriculture, sea and ocean level rise, and many others (Hase et al., 2021). However, the diversity of topics does not have to be a problem. According to some authors, it is the existence of a wide range of topics that can indicate positive developments that help disseminate different types of information to different media audiences (Painter et al., 2022).

Reporting on climate change is a challenging task, for which a media professional needs experience and a certain level of understanding of the issues (Vrabec & Pieš, 2023). Environmental journalists play a key role in this sector. According to M. Brüggemann (2017), journalists contribute significantly to the understanding of climate change as a societal problem. Their role is, for example, to decide who is legitimate in this matter and to whom they will give media space in the form of publishing statements on climate change. However, they also represent the role of mediators in their own authorial commentaries. He sees journalists as actors who produce climate-touching content in the media environment. The profile of the environmental journalist is defined by many theorists (e.g., Schäfer, 2015; Moccata, 2015; Friedman, 2004). For example, J. Holanda et al. (2022) argue that journalists are more likely to stay in the field for longer periods of time compared to other fields. They also state that such professionals are more likely to have a university degree. However, they still consider themselves to be journalists and media workers rather than environmental professionals). M. S. Schäfer (2015) points out that climate change (which falls under environmental journalism) is a transdisciplinary topic that overlaps with the natural sciences, politics, economics, culture and other fields. This theme is often covered by a variety of journalists, and therefore it can be argued that journalists reporting on climate change are largely not monothematic experts on climate change. S. M. Friedman (2004) states that environmental journalists in newsrooms also often face challenges in securing space to publish their content. She claims that such journalists are often forced to shorten or dramatize their articles and content. However, the complexity of the subject matter requires careful in-depth research and also adequate media space. A consequence of this is that many of them often use new media, in the form of online blogs or social media, where they have more freedom to tell their stories in detail (Friedman, 2004, in Pezzullo & Cox, 2014). Meanwhile, the complexity of the topic and the rather complicated terminology is not only a problem for the recipients, but many times also for the journalists themselves. J. Holanda et al. (2022) state that, in connection with the quality of media output, the creator faces the additional challenge of working with scholarly sources that often use rather technical and austere language. These are, according to them, the exact opposite of the kind of sources media professionals are looking for.

The work of environmental journalists is therefore quite demanding and requires a great deal of knowledge and experience to produce. Their products can be different kinds of journalistic outputs, such as feature stories, photo essays or video-reports. In many cases, such workers have to travel to other countries to obtain material for their content. This is especially true for stories that follow major global issues. Fieldwork is also needed for local issues where a reporter is required to react quickly and, for example, in the case of environmental disasters, to arrive on the scene as quickly as possible. If we consider the author's statements, we can argue

that this is where the pressure on environmental journalists is the greatest. If an environmental journalist happens to be unfamiliar with an area, at the very least he or she needs to know who to contact and which expert or institution will be able to provide the answers and statements necessary for his or her work. It also turns out that in their work, such focused professionals tend to investigate issues in depth and therefore their outputs are often larger in size.

3 Methodology

Media coverage of the phenomenon of climate change in any form is a fundamental line of media research in connection with the environment and ecology. There is a certain amount of media coverage of the issue, but this appears to be quite variable. We are therefore interested in how media coverage of this issue in Slovakia has evolved in recent years, and it can be argued that the timeframe of the study also captures the first entry of this topic into the mainstream media agenda. The period under review also reflects major global events, such as the COVID-19 pandemic and the outbreak of war in Ukraine. The issue of climate change is an important global topic, but one that must also compete for media space with other topics. We will therefore be interested in the extent to which the presentation of the topic of climate change will be influenced by other global issues or events, and over time periods that are ecologically significant [RQ1]. We consider ecologically significant periods to be international days that commemorate the importance of environmental protection. These include “Earth Day” (annually on the 22nd of April), “World Environment Day” (annually on the 5th of June) and “Earth Overshoot Day” (annually set on a different date). These are days or periods when the level of coverage of climate change in the media should naturally increase. Thus, we hypothesize that during time periods that are ecologically significant, the rate of reporting on the topic of climate change will increase over less thematically significant periods [H1]. It is such days that should provide media editors with the news value of the updated element that is needed for the topic to reach the media space. The media coverage of the topic should therefore, in our view, be significant. The size of the media space is limited for various reasons, but one of them is also the number of topics that the media can present. The priority of a given topic is not always easy to determine, but there are global events that, because of their importance, reach the media space “automatically”. Such topics clearly include the COVID-19 pandemic or the outbreak of war in Ukraine. Given the importance of these topics for the whole world, and therefore also for Slovakia, their significant saturation of the media space is appropriate. Therefore, we assume that these global events can have an adverse impact on the amount of content on climate change on the thematic days that are naturally associated with this phenomenon. We therefore think that the occurrence of global events like COVID-19 pandemic or the outbreak of war in Ukraine will reduce the frequency of media content about climate change, even in ecologically significant periods, compared to time periods when these events are not relevant [H2]. Keyword phrase matches in ecologically significant periods will not be evaluated on exact days, but within the weeks in which a given day occurred in the corresponding calendar year. We will do this because the media may respond to a given thematic day in their content a few days afterwards. Thus, to be clear, we declare that we assume that the rate of reporting on climate change changes in the weeks in which the theme day occurs.

Using quantitative content analysis, we will examine media coverage of climate change in the Slovak mainstream media between 2019 and 2024. We will do so using media monitoring software – Mediaboard. Through this application, we will examine media outlets, which will include print, online news and television. In our case, we base our analysis on the most important variable, which is the amount of media content that contained the keyword phrases we searched for in a single week. In our case, these are the keyword phrases “climate change” and “climate crisis” [org. “klimatická zmena”, “klimatická kríza”]. In total, we examine 27 media outlets over

a period of 5 years. About our main research method, T. Trampota and M. Vojtěchovská (2010) argue that quantitative content analysis is useful for finding what topics the media covered and has the advantage of being able to examine a large set of media content. The hard data that we obtain using it will give us the opportunity to compare the values of individual variables with each other. According to them, the relatively high reliability of the measured data is also a positive factor. A monothematic publication on methods that can be used to study climate change, and the media was published by a team of authors from the University of Jönköping in Sweden. In it, they argue that conducting quantitative content analysis using keywords (or phrases) such as “global warming” or “climate change” is a legitimate workflow. However, they argue that the researcher should be careful that the keyword phrase is not too general and that the matches the system finds are indeed related to the issue under study (Schäfer et al., 2016). We will also complement the quantitative content analysis with qualitative content analysis if additional refinement is needed, which we will do based on the soft data we obtain from the monitoring application.

Keywords – The software we use can search for different words or phrases thanks to proper entry. In our case, we will search for connections to climate change using the keywords – “climate change” and “climate crisis”. The monitoring software reports media content in which the keyword defined by us has been used at least once per media content. We consider it as a media content with the keyword phrase used. The software evaluates such matches differently, but if it is, for example, from the evening news and the keyword phrase was mentioned in two reports, the software evaluates it as a single article with the keyword used. If the content is in printed media or online content, the software evaluates the individual articles separately. If, for example, two articles containing the keywords we have defined appear in one daily newspaper, the software evaluates this result as two articles with the keyword used.

Selected media – for the highest level of objectivity, our research focuses on the most watched, listened to and read mass media in Slovakia. The sample is based on MEDIAN SK’s press releases on MML-TGI research from 2019, 2020 and 2021. The survey on media readership, listenership and viewership tends to be carried out on a sample larger than 8,000 respondents aged 14 to 79 (MEDIAN SK, 2020). We selected online media based on data collected from the IAB monitor. During the period we monitored, the top ten most visited websites featured mostly the same media. From this list, we selected web portals that focus on news (we excluded the websites *heureka.sk* and *bazos.sk*, which are used for online shopping). Based on this data, we will examine the following media:

- Printed periodicals:
 - Daily newspapers: *Nový čas*, *Plus jeden deň*, *Pravda*, *SME*, *Šport*, *Hospodárske noviny* a *Denník N*;
 - Weekly newspapers: *Plus 7 dní*, *Život*, *Nový čas pre ženy*, *Slovenka*, *Eurotelevízia*, *.týždeň* a *TREND*¹;
 - Online news: *aktuality.sk*, *sme.sk*, *pluska.sk*, *hnonline.sk*, *topky.sk*, *pravda.sk*, *cas.sk*, *dobrenoviny.sk*, *dennikn.sk*,
 - TV stations: *Jednotka*, *TV Markíza*, *TV JOJ* a *TA3*².

¹ Authors’ note: Weeklies *.týždeň* and *TREND* was not part of the MML-TGI survey. Nevertheless, we consider their inclusion in our research important, as these are weekly newspapers that have a significant position on the Slovak market.

² Authors’ note: *TA3* TV station was not part of the MML-TGI survey. Nevertheless, we consider its inclusion in our research important, as it is important and was for a long time the only news television channel in Slovakia.

Observation period – in our research we will observe a period of more than five years. An important factor for our research is to capture all ecologically significant periods and global events. We will track media content from 4th March 2019 to 25th February 2024.

Ecologically significant periods – World Environment Day (5th June 2019, 5th June 2020, 5th June 2021, 5th June 2022, 5th June 2023), Earth Day (22nd April 2019, 22nd April 2020, 22nd April 2021, 22nd April 2022, 22nd April 2023), Earth Overshoot Day (29th July 2019, 22nd August 2020, 29th July 2021, 28th July 2022, 2nd August 2023).

Global events – outbreak of the COVID-19 virus pandemic (first case in Slovakia – 6th March 2020), outbreak of war in Ukraine – 24th February 2022.

4 Results

In total, we examined media content from 27 media outlets, including daily and weekly print newspapers, online news portals, and television broadcasts, over a period of 260 weeks. During this period, we recorded 25,082 media features that contained the keyword phrases we searched for (“climate change” or “climate crisis”). In the following section, we briefly interpret each media type.

	3/2019 – 2/2020 (Y1)	3/2020 – 2/2021 (Y2)	3/2021 – 2/2022 (Y3)	3/2022 – 2/2023 (Y4)	3/2023 – 2/2024 (Y5)
DAILY NEWSPAPERS					
SME	291	219	300	206	181
Pravda	277	142	233	164	168
Hospodárske noviny	174	101	184	138	121
Denník N	184	109	124	99	148
Plus jeden deň	118	48	95	72	63
Šport	94	33	44	44	40
Nový čas	14	23	35	24	46
WEEKLY NEWSPAPERS					
TREND	50	25	35	56	59
.týždeň	45	25	28	16	18
Plus 7 dní	27	15	9	21	27
Eurotelevízia	13	6	13	13	40
Slovenka	10	11	20	12	10
Život	15	9	8	15	12
Nový čas pre ženy	5	7	2	0	2
ONLINE NEWS					
sme.sk	787	423	691	614	678
dennikn.sk	771	529	521	488	633
hnonline.sk	200	95	418	463	653
aktuality.sk	402	203	333	373	279
cas.sk	296	196	375	272	333

pravda.sk	345	149	242	201	309
topky.sk	331	187	255	229	233
pluska.sk	130	114	173	174	197
dobrenoviny.sk	286	96	62	37	16
TELEVISION BROADCAST					
TA3	969	345	515	772	515
Jednotka	276	176	248	240	267
Markíza	121	54	83	86	134
Joj	71	39	108	118	118
SUMMARY	6,302	3,379	5,154	4,947	5,300
TOTAL SUMMARY					25,082

TABLE 1: Summary of the frequency of key phrase matches over the entire study period

Source: own processing, 2024

Daily newspapers – We detected 8,712 matches within the daily print (Table 1, Figure 1). Among all seven daily newspapers, the greatest number of explicit mentions occurred in the daily *SME* (1,197 = 27%). This was followed by *Pravda* (984 = 23%), *Hospodárske noviny* (718 = 16%) and *Denník N* (664 = 15%). The four above mentioned opinion-forming daily newspapers have an 81% share of the total amount of content searched by us (Figure 1). The rest were tabloids and thematic daily newspapers – *Plus jeden deň* (396 = 9%), *Šport* (255 = 6%), *Nový čas* (142 = 3%). Based on this fact, we can therefore conclude that the topic of climate change or crisis is inherent to opinion-forming newspapers rather than tabloids or thematic newspapers.

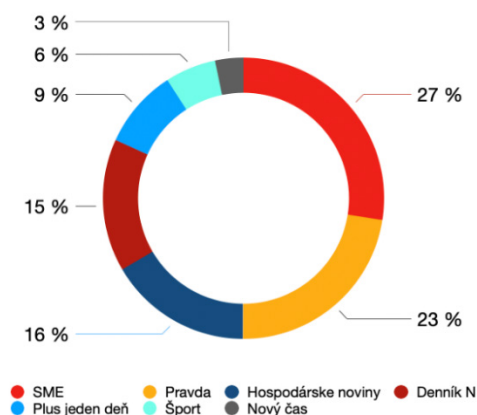


FIGURE 1: Share of media content with keyword phrases in Slovak daily newspapers in the period 2019 – 2024

Source: own processing, 2024

Weekly newspapers – We recorded a total of 679 articles with the occurrence of the keyword phrase in the weekly press (Table 1, Figure 2). We detected the most matches in the weekly *TREND* (225 = 33%) and *.týždeň* (132 = 19%). Other weekly newspapers that covered climate change were *Plus 7 dní* (99 = 15%), *Eurotelevízia* (85 = 13%), *Slovenka* (63 = 9%) and *Život* (59 = 9%). The fewest articles mentioning climate change were in the weekly *Nový čas pre ženy* (16 = 2%).

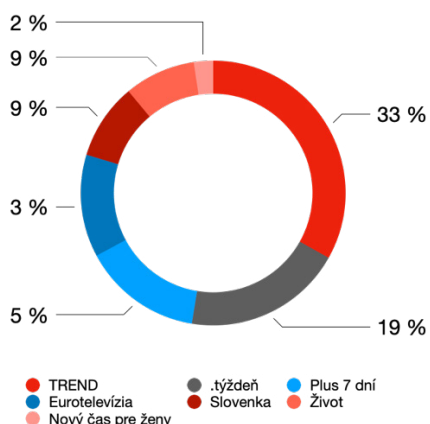


FIGURE 2: Share of media content with keyword phrases in Slovak weekly in the period 2019 – 2024

Source: own processing, 2024

Online news – we detected 14,792 media contents with keyword phrases matching in the online news feeds of the nine portals in the period we studied (Table 1, Figure 3). We recorded the highest number of contents in the portal sme.sk (3,193 = 22%) and dennikn.sk (2,942 = 20%). More than ten percent on each portal was detected on portals hnonline.sk (1,829 = 12%), aktuality.sk (1,590 = 11%) and cas.sk (1,472 = 10%). The remaining internet portals had the following distribution of the proportion of reporting on climate change – Pravda.sk (1,246 = 8%), topky.sk (1,235 = 8%), pluska.sk (788 = 5%) and dobrenoviny.sk (497 = 3%).

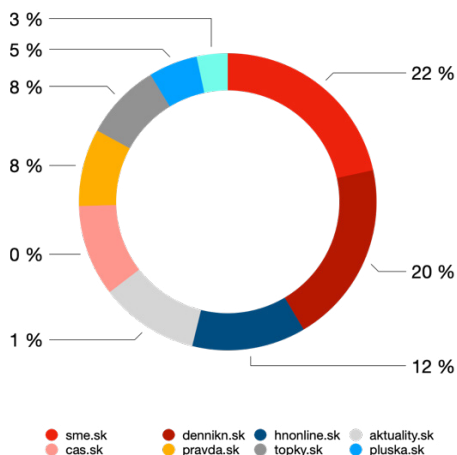


FIGURE 3: Share of media content with keyword phrases in Slovak online news portals in the period 2019 – 2024

Source: own processing, 2024

Television broadcasts – we followed the topic of climate change in the broadcasts of four Slovak television channels. In total, we noted 5,255 media contents with the presence of our searched keyword phrases in them. In total, the largest number of keywords appeared in the broadcast of the news television channel TA3 – 2,801 media contents = 59% (Table 1, Figure 4). However, when interpreting the results, it should be considered that news TV stations repeat their content several times during the day. This may be the reason why the topic of climate change is reflected significantly more in TA3. The TV station with the most coverage of the topic of climate change, right after TA3, was public television Jednotka (1,207 = 23%). The remaining two commercial stations had the same share of 9% – Markíza (478 = 9%), TV Joj (454 = 9%).

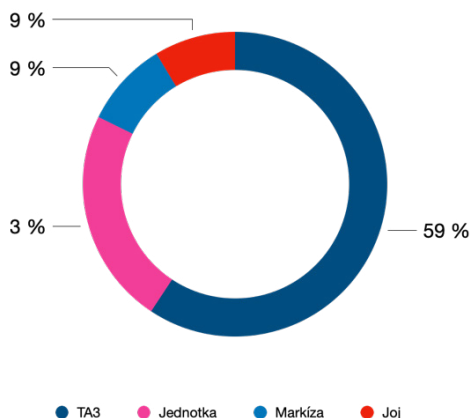


FIGURE 4: Share of media content with keyword phrases in Slovak online news portals in the period 2019 – 2024
Source: own processing, 2024

In total, we recorded 25,082 matches (Table 1) over the 260-week time period, which ultimately means that the media outlets we monitored published an average of 96.47 pieces of media content meeting our criteria each week during this period.

A total of 1,580 pieces of media content with the keyword phrase “climate change” or “climate crisis” were published during the fifteen weeks that included the global days under study (Earth Days, World Environment Days and World Overshoot Days). The amount of content published in these weeks corresponds to 6.34% of our research sample. In ecologically significant periods, on average 105.33 media content pieces were published, the median value is 107, the mode value cannot be determined. In the weeks that we do not consider to be ecologically significant, i.e., they did not occur on the days we studied, an average of 95.93 media contents were published (in total – 23,502), the median value is 85. When compared to environmentally significant events, we can confirm our first hypothesis, namely that the topic of climate change would be more prominently featured during this period.

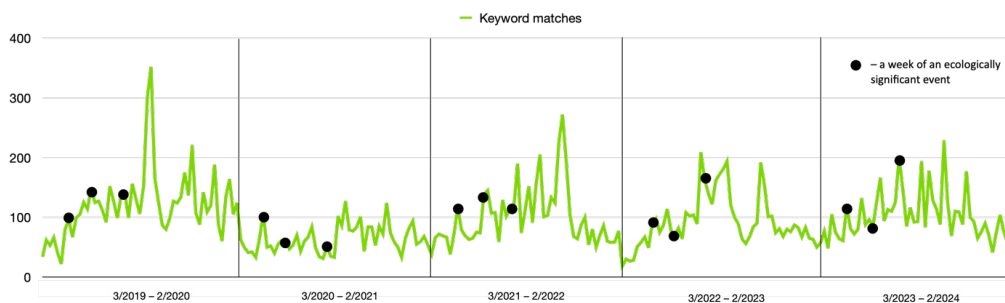


FIGURE 5: Graph showing frequency of occurrence of keywords during the study period with ecologically significant periods highlighted
Source: own processing, 2024

By looking at Figure 5 showing the keyword occurrence curve, we can notice that the ecologically significant periods marked by the theme days are in most cases at the peaks. Notable, however, are the significant infusions of the climate change theme into mainstream media content in Slovakia in other periods. As we can see in Figure 6, during the weeks in which ecological theme days occurred, the number of matches with the keywords we searched for did not once represent an annual high. In the Slovak media, the highest media matches can be observed mainly during conferences or political meetings where the state of the planet’s climate is discussed. The first ever massive penetration of this topic into the mainstream media

environment in Slovakia was the situation in September 2019, when the UN climate summit was held in New York, and which was accompanied by mass demonstrations all around the world, including large protests in Slovakia. This was the event when the topic of climate change had the highest coverage in the Slovak media over the entire period under review (Figure 6). An example of when the topic of climate change can be more widely discussed was also the situation in October 2023, when the competence of a possible new minister of the environment was debated during the formation of the new government.

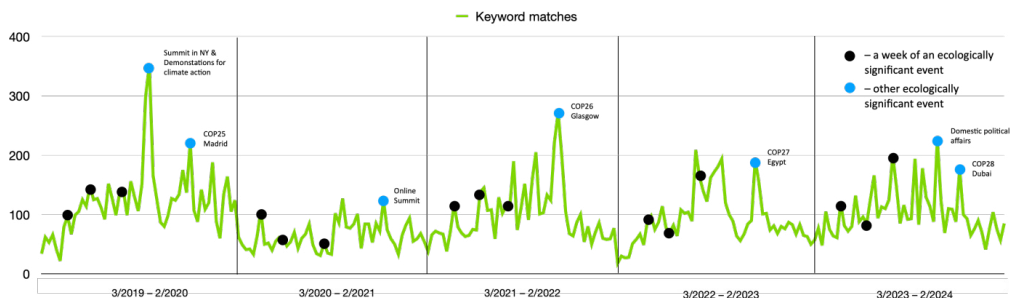


FIGURE 6: Graph showing the frequency of occurrence of keywords during the period under review, indicating observed ecologically significant events in combination with other ecologically significant events such as international summits

Source: own processing, 2024

In general, it can be argued that the topic of climate change is covered to a greater extent on our selected theme days than in other, less environmentally significant periods. However, it turns out that these events fail to receive the same amount of coverage as, for example, international conferences or other events that are often related to politics.

Global events that could have a direct impact on the media coverage of climate change are the COVID-19 pandemic and the start of the war in Ukraine. The first recorded case of the disease in the Slovak Republic dates to 6th March 2020. The war in Ukraine started in the early hours of 24th February 2022. We therefore focused on the representation of the topic of climate change on ecologically significant days in these years (Table 2).

	Earth Day	World Environment Day	Earth Overshoot Day	Year Summary
2019	97	148	136	381
2020 (C)	107	62	51	220
2021	117	74	114	305
2022 (W)	89	70	164	323
2023	119	85	147	351

TABLE 2: The sum of content with keyword phrase occurrences in weeks of global ecology days 2019 – 2023

Source: own processing, 2024

As we can see in Table 2, the rate of information in years or periods that were affected by major societal events is different than in years when nothing significant happened. In the first year under review, climate change was mentioned in 381 media content pieces during all three significant ecological periods under observation. In 2020, the year of the COVID-19 pandemic, there were 220 such media pieces. It is also important to note that since the pandemic broke out in the early part of 2020, media coverage of the pandemic in the early months was logically stronger, as it was a new phenomenon. This coverage might have largely influenced at least the first two theme days, which are Earth Day (22nd April annually) and World Environment Day (5th June annually.) In the third year under observation, which was not significantly marked by

a societal event, the level of climate change coverage during the theme days increased again. In total, we captured 305 pieces of content with keyword phrase occurrences during this period. The fourth year was marked by the outbreak of the war in Ukraine. Similar to the start of the COVID-19 pandemic, the war started at the beginning of the year. This situation could therefore clearly have influenced the information during Earth Day and World Environment Day. World Overshoot Day, which had been set for 28th July that year, was apparently already being shaped to a lesser degree by the ongoing conflict. We captured 323 pieces of media content this year, of which 164 were noted during World Overshoot Day. In the most recent year monitored, we recorded 351 pieces of content with the key phrase appearing during the weeks in which the themed days were located.

A total of 1,037 pieces of content with occurrences of the keyword phrases we searched for were published during the weeks in which there were ecologically significant days, in years with no extraordinary socially significant events. On average, this amounts to 115.22 content pieces per such week (median value is 117). In the years when the COVID-19 pandemic and Russia's war with Ukraine broke out, we cumulatively recorded 534 content pieces mentioning climate change in those weeks. On average, this amounts to 98 pieces of content published in a single week (median value is 79.5; mode value could not be determined). Thus, we note that the rate of climate change information during ecologically significant periods was reduced in years that were marked by major global events. We therefore confirm our second hypothesis.

5 Discussion

Climate change is reflected to a certain level in the Slovak media. In our data we can see the development in media coverage. We can argue that the media only started to cover climate change more systematically in September 2019, when some of the first public demonstrations were held, where the public called on the authorities to take action to counter climate change. This can also be seen in the additional Figure 7. This chart shows the frequency curve of matches of the key phrases we searched for in Slovak online media from 2012 to 2021. It clearly shows that the events in September 2019 caused the greatest coverage of climate change in Slovakia. These data are also the reason why we examined the period around 2019.

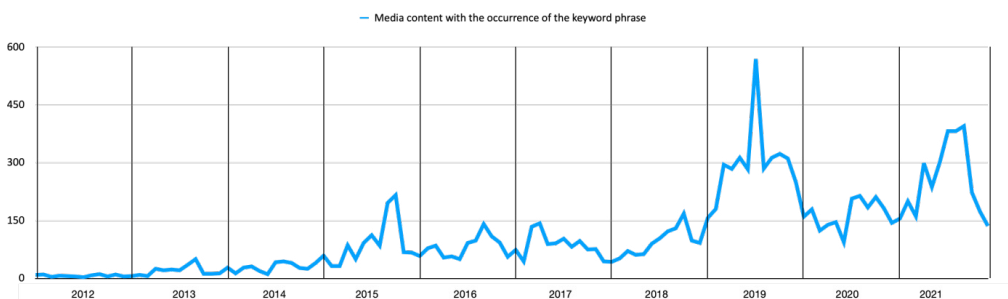


FIGURE 7: Graph representing the frequency of occurrence of keywords phrases “klimatická zmena” or “klimatická kríza” in Slovak online media between 2012 and 2021

Source: own processing, 2024

The period of recent years has been significantly marked by events that have had a major societal impact. The COVID-19 pandemic affected the whole world, not excluding Slovakia, and the conflict in Ukraine is also a very important issue for Slovakia as a neighboring country. Both events will simply receive media coverage, and at this point we would like to declare that we consider this to be appropriate. However, there is also a scientific consensus that climate change is slowly bringing a crisis with it that may be significantly more dramatic in its nature than any societal event

that we have ever experienced. Our analysis has shown that media coverage of these events has had an impact on climate change media coverage, which also seems logical given what we said about the presentation of the topic of climate change in the introduction to the study. Climate change is largely an abstract phenomenon, the consequences of which are not as obvious as, for example, the immediate statistics of hospital admissions or the number of casualties of war. Nevertheless, we would like to present a comparison between the media coverage of COVID-19 and climate change. In Figure 8 we can see a summary of the keyword matches related to climate change between the years 2019 to 2021. In Figure 9, this graph is extended with a curve showing the matches of keywords related to climate change, but also of keywords related to COVID-19. We note that the green curve in both graphs shows the same data, but on a different scale.

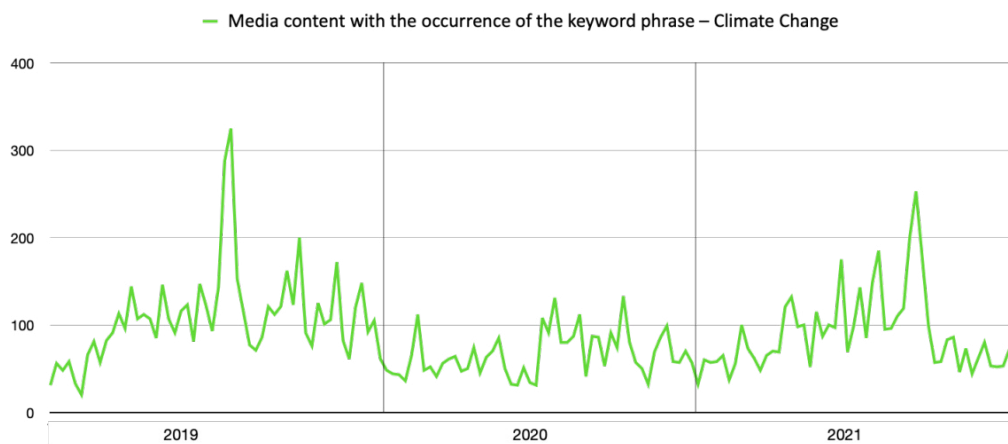


FIGURE 8: Graph representing the frequency of occurrence of keywords phrases “klimatická zmena” or “klimatická kríza” in Slovak mainstream media during 2019 – 2021 period

Source: own processing, 2024

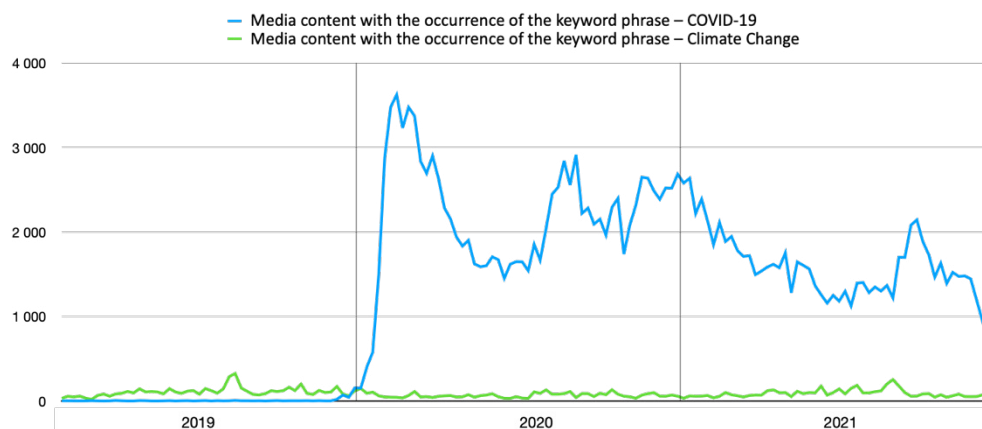


FIGURE 9: Graph representing the frequency of occurrence of keywords phrases “klimatická zmena” or “klimatická kríza” (green curve) and “COVID-19” (blue curve) in Slovak mainstream media during 2019 – 2021 period

Source: own processing, 2024

As we have already said, it is natural that a topic such as COVID-19 will receive more media coverage. At the same time, we are also aware of the fact that the occurrence of the keyword COVID-19 or coronavirus has been significant, and we can already say from our own experience that this term may have appeared in media content that did not primarily have pandemics at its core. Even so, we find it important to point out the significant difference in the level of coverage

of these two important phenomena. Another research finding is that climate change receives more media coverage during periods marked by the occurrence of political summits where “green policies” are discussed.

Before the final summary, we would like to take a short and brief note on the advantages and limitations of the main research method used. We consider the possibility of examining a wide time span with a relatively large media sample to be an advantage of the chosen research approach. On the other hand, we are aware of the shortcomings and limitations of the research, among which we can clearly include the possibility of the absence of a key phrase in the media content (e.g. article about impact of using public transport on climate without using the phrase “climate change”), or the limitations with the software used, such as the possibility of insufficient archival sources. A deeper exploration of the issue, for example by using more extensive qualitative content analysis, would also be relevant. Another factor to keep in mind when interpreting the results of this research is the measurement of keyword phrases matches in weeks. While our research focused on ecologically significant days, we chose to record matches at weekly intervals. We did so for several reasons. One of them is the fact that we did not, for example, focus only on news coverage but also on more long-term journalistic content, which may not naturally reflect the topic on the exact day. An example of this is weekly newspapers, which are very likely to simply not be published on a given theme day. Measuring in weeks may therefore also introduce the disadvantage of bias, as there may have been another event in each week that may not have been related to that theme day. For example, in 2021 Earth Day was on a Thursday, the media could have easily reflected it on a Friday in the context of climate change. On the contrary, in the same week on Monday, the media could have featured content that contained the key phrase we searched for, but which was unrelated to Earth Day. Nevertheless, we do not consider such a scenario to be probable in the final analysis.

6 Conclusion

Our study focuses on the presentation of climate change in the Slovak mainstream media between 2019 and 2024. The period under study captures the first massive penetration of the topic into the media agenda, as well as societal events, such as the beginning of the COVID-19 pandemic and the beginning of the Russia-Ukraine war. Using quantitative content analysis, we examined content in 27 Slovak media outlets, including print daily and weekly newspapers, online media, and television broadcasts. In total, we recorded 25,082 media contents that contained our search keywords (“climate change” or “climate crisis”). Media coverage was recorded in weeks. We focused more specifically on thematic days to which we attribute ecological relevance. Specifically, these were Earth Day, World Environment Day and World Overshoot Day. Our main research question was to discover how the level of coverage evolves on these themed days. We confirmed our first hypothesis, that is, that the media report more on climate change on these days. It turned out that the media generally talk about climate change more during these themed days than during other less environmentally significant periods. However, another finding was that these days generally cannot be considered as periods during which climate change is most frequently reported in the media. It turned out that climate change was mentioned much more in the context of international conferences (e.g. COPs) or other political events. Our second hypothesis was that information rates decreased in periods that were marked by global events of a negative type and in ecologically significant periods. We also confirmed this hypothesis. Both global events mentioned above, i.e., the onset of the COVID-19 pandemic and the outbreak of war, date to within quarters of the years in question, similarly to the ecologically themed days – Earth Day and World Environment Day. In both cases, the rate of climate change information on these days has declined over the years of negative global events. Thus, we are of the opinion that this was precisely because of the media coverage of these two phenomena.

Media reporting on climate change is quite complex. This is shown both by theory and by the results of our research. It is a challenge for media editors to communicate clearly and comprehensibly about an issue that may not have clear outlines at first glance. However, how they approach the presentation of the topic is even more important. In our opinion, it is also important to continually look for non-political links to the phenomenon of climate change in order to raise awareness of this global issue.

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Authors



Mgr. Matej Majerský

University of Ss. Cyril and Methodius in Trnava
Faculty of Mass Media Communication
Nám. J. Herdu 2,
Trnava, 917 01,
SLOVAK REPUBLIC
majersky1@ucm.com
ORCID ID: 0009-0001-0965-7151

Matej Majerský graduated at the Faculty of Mass Media Communication of the University of Ss. Cyril and Methodius in Trnava. He is currently a full-time doctoral student at the Department of Media Education. In addition to the issue of the link between the media and the environment/climate change, he is also researching the topic of media and information competences, multimedia and audiovisual production. In addition to academic matters at the faculty, he also contributes as a graphic designer to the European Journal of Art and Photography. Outside the faculty, he is the co-coordinator of the Young Reporters for the Environment educational programme in Slovakia.

Assoc. Prof. PhDr. Viera Kačínová, PhD.

University of Ss. Cyril and Methodius in Trnava
Faculty of Mass Media Communication
Nám. J. Herdu 2,
Trnava, 917 01,
SLOVAK REPUBLIC
viera.kacinova@ucm.com
ORCID ID: 0000-0003-0965-1961



Viera Kačínová is an associate professor at the Faculty of Mass Media Communication at the University of Ss. Cyril and Methodius in Trnava. She is a member of the IMEC professional team – the Centre for Media Literacy at the FMMC UCM and coordinator of the international network the Euro-American Interuniversity Research Network on Media Competence for Citizenship (ALFAMED) for Slovakia. Her scientific and research activities are focused on the areas of media pedagogy, media education, axiological aspects of media, the development of media competences, media education didactics and teachers' education in this field. She has been both researcher and coordinator on various projects related to media education at the State Educational Institute, taking part in their implementation into the Slovak school environment. She was a member of the Working Expert Group of the Ministry of Culture of the Slovak Republic, which was aimed at preparing the Concept of Media Education in the Context of Lifelong Learning. She participated in the CEF-TC-2020-2 Central European Digital Media Observatory (CEDMO) project.