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FACING FLOOD MANAGEMENT: THE EDUCATIONAL ROLE OF MASS MEDIA IN COMMUNICATING CLIMATE CHANGE IN POLAND

Abstract

FACING FLOOD MANAGEMENT: THE EDUCATIONAL ROLE OF MASS MEDIA IN COMMUNICATING CLIMATE CHANGE IN POLAND

The proposed paper contains the results of an empirical analysis of the educational role of the most relevant opinion weeklies published in Poland at the time of writing. The research project was carried out after the 2024 flash flood, a significant cause of which has been considered to be the deepening climate change. The research itself was conducted through content analysis, focusing on how the weeklies reported on the course of the flood and the removal of its effects. The project was designed around the simple question of whether climate change was being indicated in the texts as the cause of severe weather phenomena and if so, in what context these changes were reported. The research results did not show that opinion weeklies used the flood to assume an educational role. However, analysis confirmed a clear political and social polarization resulting from media bias in the presentation of content by both conservative and liberal weeklies. The research project is part of a wider analysis of the role of mass media in the dissemination of information and disinformation on climate change. As part of ongoing global research, this article presents a Polish perspective on climate change reporting in the mass media.

Keywords: food management, mass media, climate change, media bias, political polarization

JEL: H12, Q56

Introduction

The problem of climate change and the process of educating the general public on the matter, is currently a key subject of research. Issues of particular interest include: the importance of education in the development of people's awareness of climate change and the role of human activity in driving it; populism as a growing threat to the implementation of effective solutions limiting climate change, the role of politicians and civil society in the effort towards energy transformation and introduction of progressive actions in the field of sustainable development.

The article presents the results of research conducted in Poland in the context of the flash flood (hereinafter: flood) that occurred in September 2024. The research was conducted by analysing the content published in Polish opinion weeklies, which reported on the causes and the course of the flood, as well as the removal of its effects. It was assumed that the mass media are a tool for implementing educational policy. They are an important channel for transmitting content that shapes the level of awareness of individuals and influences the creation of personal attitudes towards climate change.

The aim of the presented research was primarily to determine whether the published journalistic materials contained information linking the origins of the flood with climate change, and to what extent the political orientation of each of the weeklies determined the content of these articles. Designating as the research subject the way in which opinion weeklies in Poland reported on a specific phenomenon that caused dramatic human and material losses was considered a just context, important for determining the educational role of the mass media. The research project assumed that the mass media constitute a construct that allows individuals to connect climate change with tangible specific consequences for local communities. The timing of the research during the period when the mass media reported on the flood was not accidental and resulted from the intention to determine whether the weeklies shaping public opinion in Poland used that tragedy, which had directly affected so many, in order to educate and raise awareness about the occurrence of climate change and the resulting consequences. The aim of the research was therefore to determine the educational role of Polish opinion weeklies in relation to a specific event, the cause of which was, among others, climate change.

This research is part of a set of analyses conducted in the context of the role of mass media in the reality of climate change, which triggers specific, often polarized social attitudes towards the progressing environmental situation and the need for sustainable development.

The empirical results of the study contribute new findings to the state of knowledge and existing literature on the educational role of mass media in the face of climate change. The conclusions drawn from the study should also make decision-makers (as opinion leaders) aware of the importance of their statements in shaping public opinion. Moreover, they should show decision-makers (at all levels

of government) how to cooperate with mass media as potential channels of education about climate change, treating mass media as an active partner with significant social influence. The empirical results also confirm the importance of political populism revealed in media bias resulting from the political orientation of weeklies for communicating climate change in Poland and their impact on promoting sustainable development.

1. The educational role of mass media in the face of climate change

The role of mass media was already firmly established in the previous century. Research conducted by Paul Lazarsfeld et al. (1944) revealed limited importance of the media in shaping public opinion. A more important role in that regard is played by 'opinion leaders'. One of the three models of response to media messages is the reinforcement of positions that already exist in public opinion. This means that individuals pay attention to messages that are consistent with their way of thinking, while rejecting or ignoring others that are inconsistent with opinions they hold. This model is gaining importance in the face of deepening social polarization resulting from the communication processes of individuals taking place primarily within their own information bubbles (Hamborg, 2019; Serafini, 2023) and the clearly emphasized intentional political bias of the media (Hopmann et al., 2012). Biased representation of views depending on the political orientation of the media can distort reality by contesting facts. At the same time, the issue of the need to advance sustainable development and prevent further climate change is currently one of the basic issues used in the processes of social and political polarization (Kulin et al., 2021; Buzogány, Klotzbach, 2021; Marquardt Lederer, 2022).

Other studies conducted by Denis McQuail also in the 20th century confirmed the overrepresentation of politicians in news reports, the support of values conducive to social consensus by journalists, and the transmission of information confirming opinions already existing in public discourse (McQuail, 1994). Similarly to the model describing the importance of the media in shaping public opinion and the positions it represents, the role of the mass media as a tool that can also serve to socialize individuals towards climate change is outlined. However, it seems necessary to meet two conditions. The first is the participation of various entities in this process – social leaders (not necessarily politicians) capable of aggregating public opinion around facts and their scientifically confirmed interpretation. The second is the creation of a platform for discourse on the issue of change, which will show inclusive tendencies and not the exclusion of entities presenting alternative beliefs.

Research on the role and importance of the media in disseminating knowledge and shaping public opinion on climate change has been conducted for many years (Smith, 2005; Sampei, Aoyagi-Utsui, 2009; Wahyuni, 2017; Junsheng et al.,

2019). While initially climate change education was focused on translating scientific knowledge into content understandable to laypeople, currently the educational role of the media is increasingly presented in the context of polarization. Public opinion is reached by content that polarizes education into progressive and traditional (Wallace, 1993; McCright et al., 2015; Nordensvard, Ketola, 2022).

Research conducted in the USA by Ronald E. Ostman and Jill L. Parker (2010) indicated that the most commonly used media for publishing environmental content are newspapers and television. At the same time, the choice of mass media and the level of use of environmental news transmitted through them depend on the level of education. Better educated people used television to a lesser extent than less educated people. Rejecting television as a credible source of information, better educated people preferred printed media other than daily newspapers. In the course of the research, the authors negatively assessed the work of journalists, indicating four criteria – lack of balance, biased political orientation, sensationalism and a tendency to select in order to maximize the audience. A small majority considered that the media provided true information when reporting on environmental issues.

Research on the role of media that deliver climate news was also conducted by Sayed Abbas Sadat et al. (2024), who considered radio and television to be the most effective mass media. Conducting research in Afghanistan, where low literacy levels are common, along with the poor socio-economic conditions of Afghans and low access to newspapers and the internet, they identified channels that should be of particular importance in climate campaigns implemented in developing countries.

In recent years, new technologies have been rapidly taking over the media landscape. Matthew Barnidge et al. (2021) conducted research aimed at determining whether immersive journalism and augmented reality (AR) can be an effective tool for educating and acquiring knowledge about climate change. The experiment did not confirm any direct impact of new forms of journalism on acquiring this knowledge. However, researchers noticed an indirect impact on cognitive competences, conditioning it with an individual's pre-existing knowledge of climate change. As the authors of the experiment argue, the role of the media, especially traditional, is more important in gaining knowledge and shaping perception of issues related to climate change by the society. The way in which television, radio, and newspapers convey complex scientific issues to society reached a critical point in the post-industrial world, in which the media became highly influential. At the same time, in their considerations, the authors emphasize that the effects of climate change become real for the public only when they start being felt by local communities. In the context of these analyses, the authors raise questions for future research, such as connecting or disconnecting humans from the causal influence on climate change, understanding their responsibility in order to trigger more effective policy

responses to the problem of climate change and influence the adoption of necessary changes.

Ha Junsheng et al. (2019) revealed in their research that mass media influence the awareness, attitudes and knowledge of individuals on the subject of climate change. The authors suggest that mass media contribute to building awareness and shaping favourable attitudes of individuals towards climate change. Thus, as the authors point out, mass media can become allies of decision-makers in taking action by promoting awareness of climate change and responsible behaviour of individuals. Another issue that the authors draw attention to is the creation of coalitions of all those who have a potential influence on shaping the awareness of all individuals, not just the decision-makers. They indicated teachers, civil society entities, public and private institutions that should cooperate with each other so that the processes of communicating about climate change might become understandable and widespread. Ha Junsheng et al. (2019) emphasized that awareness is a necessary condition for individuals to adopt behaviours that adapt them to climate change. They considered mass media as an entity whose one of the basic challenges is shaping this awareness. These scientific findings are not new, simply deepening the knowledge about the role of mass media in communicating climate change. Similar research was previously undertaken in Japan by Yuki Sampei and Midori Aoyagi-Usui (2009). The researchers conducted an analysis of how Japanese newspapers reported on global warming from January 1998 to July 2007, paying particular attention to the impact of reports on public opinion. The authors indicated that a significant increase in the number of press articles correlated with an increase in public interest in the topic of global warming. The research proved that in order to effectively communicate climate change, it is necessary to develop strategies that are then implemented by various entities, which will maintain interest in climate change in the mass media. Moreover, Yuki Sampei and Midori Aoyagi-Usui (2009) emphasized the relationship between social awareness and media reports on global warming. The public opinion surveys cited in the article reveal that as mass media coverage increased, public concern about global warming increased dramatically. However, the researchers' findings went further. They found that the number of front-page articles about global warming, as well as the total number of articles devoted to the phenomenon, significantly affected public interest in environmental issues in general. Raising public awareness is temporary, because when mass media stop publishing environmental information, the role of political or social information gains importance.

The latest research also carried out in Asia (India) connects the problems of climate change with democracy. The authors of the study Dharitri Borah et al. (2024) emphasize that climate change, which results in extreme weather phenomena, exacerbates a number of issues, including energy security, deforestation, water shortages and loss of biodiversity. Climate change affects food security, infrastructure, economic activity and human health; at the same time, complex socio-economic and

cultural dynamics make the process of dialogue with local communities difficult. The authors of the study set its framework by referring to the awareness of global media in the field of policy frameworks, environmental protection, and the impact of climate change on vulnerable communities, as well as their role in increasing social awareness, promoting public policy and facilitating pro-climate actions.

To sum up the above findings confirming the significant educational role played by the mass media, the scientific project was conceptualized and its theoretical framework defined. The project assumed that the research would be carried out locally. This allowed for indication of the educational role of the media in the context of the effects of climate change on local communities. In addition, the analysis was conducted in a period when there was intensive reporting of events resulting from climate change and the study included opinion weeklies classified as the so-called traditional media (content studies were conducted based on online editions of the weeklies). In the research process, attention was paid to the activity of opinion leaders whose opinions or positions were reported or commented on positively or negatively.

2. Research method and results

The primary objective of the content analysis was to determine whether Polish opinion weeklies with the largest reach, when reporting on the course of the flood that took place in September 2024, have played an educational role for readers. The subject of the research was to identify the way in which each of the weeklies (taking into account the presented political orientation) reported on the causes of the flood. The flood in the article was treated as an effect of climate change and an argument for the need to take specific actions to protect citizens. The flood, as a variable, allowed us to determine whether the mass media shaping the opinion of the Poles also play an educational function. For this purpose, a specific fact (flood) perceived as a catastrophe threatening human existence was used. The analysis included journalistic materials that were published during the flood and shortly after its occurrence, which additionally justifies the educational role of the mass media resulting from the interest and affective approach of individuals to these events and their causes.

The research was conducted between 18 and 30 November 2024, analysing the content of articles on the September flood in Poland published in Polish opinion weeklies (Table 1), between mid-September and 18 November 2024, when the research began. The opinion weeklies represented diverse political orientations, which allowed for this aspect to be included in the research, by indicating the impact of the weekly's orientation on the presentation of flood-related content.

Table 1. Weekly opinion magazines and data on circulation and political orientation

Weekly opinion magazine titles	Circulation at the end of 2023 (excluding e-editions) / political orientation
<i>Newsweek</i>	63 thousand / liberal-left
<i>Polityka</i>	82 thousand / liberal-left
<i>Tygodnik Powszechny</i>	22 thousand / liberal-catholic
<i>Gość Niedzielny</i>	63 thousand / conservative-catholic
<i>Do Rzeczy</i>	28 thousand / conservative-liberal
<i>Sieci</i>	29 thousand / conservative

Source: own study based on data provided by weeklies.

The study covered all journalistic materials published in the online version of each of the weeklies. Articles were searched using the keywords: “flood 2024” and “flood in Poland”. The selection of research materials was done manually and was carried out in two stages. In the first stage, articles were searched on the websites of the weeklies and through the Google search engine, providing the keyword and the name of the weekly. Comparison of the collected data during the two selections allowed us to optimize the selection and include in the research all texts found online published by each of the weeklies. As a result of analysis of the content of the materials, another selection of articles was made, accepting for research only those that in their content referred in any way to climate change. The analysis omitted journalistic materials that exclusively focused on reporting on the course of the flood, civic activity or services responsible for evacuation or removal of flood effects. However, the number of these articles was indicated, which allowed us to illustrate the number of texts devoted to the issue of climate change against the background of the total number of published information devoted to the flood. The tables therefore include only the number of journalistic materials concerning the subject of the analysis in each of the weeklies, indicating at the same time their relation to the total number of texts devoted to the flood. In addition, arguments confirming or rejecting climate change and its impact on people’s lives are presented, it is revealed which entities in the journalistic texts were held responsible for the flood and how the weeklies fulfilled the educational function. Attention was also paid to whether the articles became a space for politicians to speak out and what was the tone of these statements (only quotes were included in the analysis).

In order to organize the research process and then the analysis, the following research questions were adopted in the article:

- RQ1. Did the content of the articles indicate climate change as the cause of the flooding in Poland in 2024?
- RQ2. What arguments were cited in the opinion weeklies to confirm climate change?
- RQ3. Did the articles indicate entities responsible for climate change and the impact of their activities on people’s lives?

- RQ4. Did the content of the journalistic materials indicate what actions should be taken to stop climate change and minimize its effects?
- RQ5. Did the content of the journalistic materials contain references to the political narrative towards specific politicians or political parties?
- RQ6. Did the content of the journalistic materials differ in terms of reporting climate change and its impact on the environment depending on the political orientation of the weekly?

The tables attached present the answers to research questions 1 to 4 (An attachment presenting the sources of access to research: https://docs.google.com/document/d/1U3PBy1L08QY31_3ibgncw1QvRgR5bowe/edit?usp=sharing&ouid=110406177643339543523&rtpof=true&sd=true).

2.1. Limitations

The main limitation in the conducted research was the use of journalistic content available online, which may not fully correspond to the content that was available in the paper version. The second limitation, also related to the analysed online version of journalistic materials, is the fact that some information was removed by the editorial offices of the weeklies. Another significant limitation is that it is impossible to determine the place of publication of the content in the paper editions of the weeklies. It was therefore difficult to determine the level of importance of the analysed content that each editorial office assigned to the information. Despite the above-mentioned limitations, the findings illustrate how each of the weeklies fulfilled the educational role in reporting on climate change as one of the basic causes of the flash flood in Poland.

2.2. Climate change (as a source of flood) in conservative weeklies' reports

In Poland, three weeklies position themselves as conservative outlets. Two (the weekly *Sieci* and the weekly *Do Rzeczy*) present a clearly right-wing orientation, positioning themselves as entities involved in supporting the policies of right-wing parties in Poland, currently in opposition. *Gość Niedzielny* is a weekly with a conservative-Catholic orientation and clear connotations with the dominant branch of the traditional Catholic Church in Poland.

The first two weeklies significantly politicized the message related to the flood, not referring to climate change as a factor contributing to extreme weather phenomena. The weekly *Sieci* did not publish a single text devoted to climate change, but its message was strongly politicized. Both the government and the Prime Minister personally were blamed for ignoring signals about a possible flood, and then phrases were used indicating that people in flooded areas were 'deceived', and the messages directed at flood victims were of a propaganda nature. Politicians and the services subordinate to them were accused of being sluggish in taking action

to remove the effects of the flood. The second weekly, *Do Rzeczy*, published a total of three texts, of which only one mentioned climate change. At the same time, the other two questioned its occurrence, considering floods to be normal phenomena caused by changes in the weather. Similarly to the weekly *Sieci*, the message was strongly politicized, and the arguments cited in both titles were similar. As regards climate change, it was pointed out, among other things, that it results from the ideology of 'eco-terrorists' who block investments in retention reservoirs and that the measurements of the occurrence of global warming are based on faulty premises.

The last of the weeklies also focused its publications on the ideological nature of the message, which, however, differed from the other reports. The weekly *Gość Niedzielny* indicated climate change, understood as global warming (one journalistic material), in the remaining texts emphasizing the weather as the cause of the flood. At the same time, the weekly indicated 'signs' that flow to people and 'miracles' related to the protection of sacral buildings from flooding. This point of view, resulting from the appeal to the faith of its readers, should be considered a manifestation of the archaisation of messaging in the Polish Catholic Church, which in the vast majority does not engage in the process referred to as ecotheology. Traditionalist orientation is common in the Polish Church, despite the clearly differing position of Pope Francis expressed in the encyclical *Laudatio si*. This results in a lack of mention of the human responsibility for the effects of climate change, although at the same time, as emphasized in this weekly, changes in weather cause financial consequences for many – higher maintenance costs, property insurance and the need to introduce changes in building regulations. Similarly to the previously analysed weeklies, the government and local governments are 'responsible' for improper management of flood removal.

In total, all three conservative weeklies published two articles mentioning climate change as the cause of the flood; two texts questioning the occurrence of climate change and three texts clearly indicating that the weather and related phenomena (drought and heavy rain) are a natural cause of the flood. This allows for the conclusion that in conservative weeklies, climate change as the cause of the flood in Poland was questioned using unscientific arguments.

2.3. Climate change (as a source of flood) in the reports of liberal weeklies

Three titles are positioned as liberal weeklies: *Newsweek*, *Polityka*, and *Tygodnik Powszechny*. Each of the weeklies clearly indicated the occurrence of climate change, the effects of which are felt, among others, in extreme weather phenomena. It should be emphasized, however, that each of the weeklies devoted a different number of texts to the analysis of climate change. *Newsweek* analysed climate change in 53 percent of articles on floods, raising the responsibility of various entities in aggravating climate change. It also accused politicians (without indicating specific individuals or political parties) of politicizing the discourse, avoiding the

implementation of necessary solutions, passivity, questioning scientific findings, and promoting unscientific theories. The weekly also indicated others responsible for the aggravation of climate change – people who, despite the rising standard of living, continue to devastate the environment and do not feel obliged to protect it, the Catholic Church, which in the vast majority promotes archaic views, with its representatives in terms for ecological activities such as: ‘a version of green Nazism’. Finally, the weekly also found celebrities, journalists and pseudo-scientists responsible, who use their visibility and outreach in social media to promote theses not supported by science. The second weekly, *Polityka*, devoted a total of 23% of published articles to climate change. Similarly to *Newsweek*, *Polityka* indicated the groups responsible for climate change (politicians and people), but considered climate change on a global scale, paying attention to the governments of the global South, which use their economic situation to avoid transformations that limit climate change.

The last of the weeklies was *Tygodnik Powszechny*, which devoted 50% of its journalistic materials published in connection with the flood to analysing climate change and its effects. *Tygodnik Powszechny* has a Catholic orientation, but the subject matter of the messages was different from the previously analysed content published in the conservative *Gość Niedzielny*. The journalistic materials published in *Tygodnik Powszechny* did not question either climate change as the cause of the violent weather phenomena, or the scientific findings regarding the causes and effects of climate change. Governments and institutions subordinate to them were indicated among those responsible for the flood and its effects. At the same time, it was emphasized that the responsibility dates back to the period of political transformation in Poland. It was pointed out that all those in power after 1989 neglected the energy transformation, there is still a lack of legal regulations taking into account the changing reality, and hydraulic structures have not been modernized for many years. The weekly also draws attention to the fact that politicians ignore the voice of scientists focusing on the necessary renaturalisation of areas near rivers. This message from a liberal-Catholic weekly confirms that Poland does not only have an archaic approach to ecology; *Tygodnik Powszechny* proves that climate change can also be seen from the perspective of Christian theology, understood as eco-theology. The weekly also discussed climate change from a global perspective, calling for the introduction of a global aid fund to eliminate the effects of climate change. *Tygodnik Powszechny* that those particularly responsible include people such as Jeff Bezos and Elon Musk (who generate a significant carbon footprint due to their lifestyle); companies such as fuel giants and concrete producers, who generate the highest level of carbon dioxide emissions. These entities, among others, should be burdened with the direct necessity of supporting the fund and be responsible for their contribution to ongoing climate change.

The reports published in liberal weeklies were decidedly more educational in nature, did not question climate change and provided information about the objective circumstances of the flood. However, it is impossible to confirm that they

performed their educational functions properly. When providing information, liberal weeklies did not create a space for debate, using quotes from right-wing politicians, which in the context of the published content sounded particularly negative and ridiculed political opponents, actually deepening differences of opinion. Moreover, other civil society entities were not involved in the journalistic materials, which could have influenced the creation of an actual space for discourse. Therefore, none of the liberal weeklies took advantage of the increased interest in the problem of climate change, which resulted from the specific situation (flood) in Poland, to implement the educational process. Adjusting to the expectations of readers, opinions and positions were conveyed, which readers are in fact aware of. Additionally, by pointing to climate change as a global phenomenon (which is, of course, unquestionable), the impression was created that since the problem is global, individuals are powerless in the face of these changes. The process of blurring responsibility and transferring it to other entities can hardly be considered as having an impact on the educational processes, but rather as justifying that the actions of individuals may be ineffective in the face of the activities of other entities.

The table 2 presents a summary of the differences in views presented in journalistic materials published by the weeklies.

Table 2. Dominant views polarizing the messages in liberal and conservative weeklies

Liberal weeklies	Conservative weeklies
Renaturalisation of rivers and modernization of hydrological structures	Regulating rivers and building retention reservoirs
Politicization of the discourse – politicians (as a social group) politicize the discourse by not carrying out the tasks necessary to minimize the effects of climate change	Politicization of the discourse – blaming politicians from the ruling party for the lack of action and improper management of the flood damage removal
Recognition of scientific findings on the deepening of climate change and the demands for change promoted by ecologists	Denying climate change, considering it a manifestation of ideology and ‘eco-terrorism’ carried out by environmentalists
Promoting the need to implement a green transformation (supporting the Green Deal)	Questioning the need for green transformation (rejecting the Green Deal), considering it as EU’s interference in the policies pursued by individual countries
Perceiving climate change as a global problem that requires action by all actors	Climate change is not happening, extreme weather events are the result of normal natural processes
Responsibility for climate change lies with politicians, celebrities and other public figures, international corporations, governments of countries that do not take action to stop climate change and people who actively participate in the destruction of the environment.	The responsibility for the effects of floods, as a natural phenomenon, lies with the liberal-left government, including the Green Party, which is in the government coalition, promoting the renaturalisation of rivers and areas around them instead of building new retention reservoirs.

Source: own study.

3. Discussion and conclusions

Both the reporting on climate change and on its effects was presented in a distinct manner, depending on the political orientation of the weekly (see Tables 1 and 2). The educational function was not fulfilled by any of the weeklies. Conservative weeklies denied the occurrence of climate change, while liberal weeklies published content that confirms the occurrence of climate change, although at the same time the tone of the articles did not implement the educational process, only reinforcing the positions of the readers. The published content thus deepened the social and political division in Poland. Such a polarized image of reality, which is significantly influenced by the mass media, makes the problem of climate change a subject of political confrontation. This conclusion from the research in Poland confirmed the scientific findings made in the USA by Ronald E. Ostman and Jill L. Parker (2010), who negatively assessed the work of journalists, accusing them of lack of balance, biased political orientation, sensationalism and a tendency to select content in the published materials as to maximize the audience.

The research also clearly indicated differences in two areas that can be analysed from the perspective of media bias, which influences social and political polarization. The first area is marked by the number of texts that touched on the subject of climate change in relation to the total number of journalistic materials reporting on the course and activities related to the flood. Conservative weeklies used the technique of intentional media bias, consisting in omitting the topic, keeping silent about some or all of the facts and emphasizing other facts by adding biased comments (Groseclose, Milyo 2005; Groeling 2013). On the other hand, liberal weeklies also used media bias, which I assess as partially unintentional. Unintentional bias consisted in the selection of information at the level of the media organization (according to the gatekeeping concept of Shoemaker, Vos, 2009), i.e. the influence of the orientation of the mass media on the selection of content taking into account the opinions presented by the recipients. On the other hand, the intentional bias resulted from creating the phenomenon of negativism (by referring to selected quotes from right-wing politicians and people sharing such a position), which in the context of the message in fact ridiculed the people quoted.

The second area is the politicization of messages related to the flood and its significant cause, i.e. climate change. In conservative weeklies, the politicization of the message again took on the character of intentional media bias, consisting in the unambiguous tone of the materials and creating the phenomenon of negativity through negative images of liberal-left politicians (Hopmann et al., 2012). Liberal weeklies also pointed to politicians as responsible for the lack of effective action to limit climate change. According to liberal weeklies, the actions of politicians since 1989 have focused mainly on taking care of political and electoral support, while avoiding decisions and actions that would actually modernize Poland. The politicization of the discourse has therefore determined two different dimensions.

Conservative media used the flood as an event allowing them to criticize the current government in Poland (liberal-left), while liberal weeklies treated the flood as a fact that should become a premise for making important, albeit difficult, political and environmental decisions in Poland.

The media bias that appeared in the messages of both conservative and liberal weeklies influenced the negligible educational value of the messages in the field of sustainable development and shaping civic awareness of climate change. During the flood and shortly after its end, Polish society received contradictory information regarding a specific event (flood) and the reasons for its occurrence. The period of information transfer by opinion weeklies to society at a time when a specific situation naturally aroused an increase in individual interest was not used. As indicated by the research of Yuki Sampei and Midori Aoyagi-Usui (2009), periods of increased interest in the issue of climate change are optimal for conducting educational activities with the support of various civil society entities. Sampei and Aoyagi-Usui's research show that political issues in Japan became the leading issue in the media agenda only when issues related to events resulting from climate change receded into the background. The reported research conducted in Poland indicated, however, that a specific event related to climate change did not introduce changes to the media agenda. The flood and the issue of climate change were reported taking into account the political context and not the creation of content influencing the shaping of citizens' awareness. Earlier, Przemysław Wrochna (2018) presented similar conclusions about the politicization of messages related to climate change in Poland. Wrochna claims that climate change functions in the Polish media as a subject of political struggle and not a manifestation of knowledge about the world. The lack of a specific referent of the concept of climate change in the mass media means that there is a problem with translating the concept itself into reality. Earlier research conducted in Poland by Magdalena Steciąg (2012) also revealed that the semantic profiles of the concept of 'global warming' that function in the Polish press create an image of climate change as an abstract issue. The abstractness of phenomena related to climate change also means the effect of the so-called blurring of responsibility for the causes of phenomena such as flash floods.

The research by Ha Junsheng et al. (2019) cited in the introduction, indicating the role and importance of civil society in the processes of education on climate change, also did not occupy a significant place in journalistic materials. None of the weeklies created a platform for discussion involving various entities that can actively participate in creating pro-environmental attitudes and behaviours. Apart from quoting a few experts (climatologists and hydrologists) who expressed theses that were important, but often rejected by local communities due to threats or a low level of knowledge, no attempt was made to build a platform for discourse confronting different positions from diverse sources. Therefore, public interest was not used to start a substantive discussion on the need to implement solutions in Poland in response to climate change. Anna Stawowska (2022) compared how

Poland and Sweden shape ecological awareness. Her comparison included communication and marketing activities, treating them as forms of informal education conducted, among others, by the mass media. The comparison of communication and marketing activities conducted in both countries turned out to be unfavourable for Poland. Although the comparison shows that awareness of climate change in Poland is gradually growing, it still significantly differs from the level of awareness and pro-ecological behaviours demonstrated by the Swedish. One of the worrying facts, Stawowska noted, is the downplaying of climate change by Poles and their failure to notice its negative impact on the economic, social or political situation, especially in sectors such as agriculture and food production. Downplaying climate change as a factor influencing people's well-being and their sense of security, as well as the economic consequences, may significantly affect the growing support of populist parties, thus threatening democratic public institutions. Bartłomiej Łódzki (2023) also pointed to the role of media in creating social trust in the context of research results on climate change. Łódzki points out that the effect of low trust may be a lack of support for climate change policy. Trust is key to shaping people's attitudes towards climate change and also allows institutions to introduce effective climate change policies.

The content published by two Catholic weeklies representing the ideologically divided Catholic Church in Poland has also contributed to deepening social distance. The majority orientation dominating the Polish church is decidedly archaic in nature, seeing the role of the Catholic Church based solely on faith (which consequently questions scientific achievements and even the position of Pope Francis) and the minority, decidedly progressive and intellectual, which promotes ecotheology (Pastwa, 2023). This division, similar to that marked by conservative and liberal media, creates information spaces in which only some members of the Catholic Church in Poland have reliable knowledge and awareness of climate change.

In summary, the conducted research revealed that the strong political and social polarization characterizing the content published in opinion weeklies in Poland also questions their educational role, which is important for shaping awareness and creating opinions that support the ability to think critically. By creating information that is not inclusive but only takes into account content accepted by its own readers, mass media do not shape public opinion, which is necessary for activating civil society. The lack of an active civil society, in turn, eliminates substantive control of the authorities and pressure on them to take actions aimed at sustainable development. The deepening climate crisis, the cause of the flash flood, remained, due to the analysed media reports, either an abstract construct or an ideology imposed by 'leftists'. The opportunity was lost for the tragedy to become, as a visible and noticeable effect of climate change, an incentive for taking up a serious inclusive discourse, the effect of which could be the implementation of the necessary modernization in Poland in the field of sustainable development.

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