FABRICATING DOUBT AND PERSECUTING SCIENCE

ANALYSIS OF MISINFORMATION ABOUT THE CLIMATE CRISIS IN CROATIA
# CONTENT

<table>
<thead>
<tr>
<th>Abstract</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>4</td>
</tr>
<tr>
<td>Methodology</td>
<td>6</td>
</tr>
<tr>
<td>Analysis</td>
<td>12</td>
</tr>
<tr>
<td>General characteristics of published articles</td>
<td>12</td>
</tr>
<tr>
<td>Narrative analysis</td>
<td>18</td>
</tr>
<tr>
<td>Conclusion</td>
<td>29</td>
</tr>
<tr>
<td>About Faktograf</td>
<td>33</td>
</tr>
</tbody>
</table>

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ABSTRACT

In this analysis, we examined 90 articles published by the Faktograf.hr portal from 2018 to 2023. In those articles, we fact-checked statements and debunked misinformation related to the climate crisis. We categorised the collected articles into six misinformation narratives, based on the expanded CARDS taxonomy: 1) Global warming is not happening, 2) Human greenhouse gases are not causing global warming, 3) Climate impacts are not bad, 4) Climate solutions won’t work, 5) Climate movement/science is not reliable and 6) Overemphasis of extreme weather phenomena. The analysis reveals that the majority of misinformation related to climate change observed by Faktograf promotes a narrative suggesting that the climate movement/science is not reliable. Consequently, undermining trust in science appears to be the primary goal of actors promoting climate misinformation.

The analysis also observed that climate misinformation is often disseminated by the same actors who used similar digital communication channels to spread misinformation related to the COVID-19 pandemic. During the COVID-19 pandemic, it was demonstrated that the level of citizens’ trust in institutions is the factor most strongly correlated with the success of individual countries in managing the public health crisis, including vaccination campaigns and community measures to curb the spread of the disease.
INTRODUCTION

Since its inception, Faktograf has been addressing issues related to climate and climate change, aligning its assessments with the findings of the UN Intergovernmental Panel on Climate Change (IPCC) and the scientific consensus on climate change. Throughout our fact-checking endeavours, we have observed a noticeable rise in misinformation concerning climate and climate change within the Croatian online space.

When we talk about climate misinformation, we use the definition of the global coalition Climate Action Against Disinformation (CAAD), which states that climate misinformation and disinformation refers to misleading content that:

- Undermines the existence or impacts of climate change, the unequivocal human influence on climate change, the need for corresponding urgent action according to the IPCC scientific consensus and in line with the goals of the Paris Climate Agreement;
- Misrepresents scientific data, including by omission or cherry-picking, in order to erode trust in climate science, climate-focused institutions, experts, and solutions; or
- Falsely publicises efforts as supportive of climate goals that in fact contribute to climate warming or contravene the scientific consensus on mitigation or adaptation.

The term climate misinformation is commonly associated with the denial of climate change, implying the belief that climate change is either not real or not caused by humans. However, this represents just one form of climate misinformation. Another form involves misinformation that doesn’t necessarily deny the existence of climate change, but instead misinterprets or misrepresents measures against the climate crisis. It may also cast doubt on the credibility of scientists working in this field, often contributing to political polarisation. This
shapes the public conversation around the climate crisis, leading to an influx of misinformation that undermines public awareness of the reality of climate change.

The report titled “Deny, Deceive, Delay: Documenting and Responding to Climate Disinformation at COP26 and Beyond”, prepared by the Institute for Strategic Dialogue (ISD), CASM Technology and the Climate Action Against Disinformation Alliance (CAAD) delves into the issue of climate misinformation. The report identifies the discourse of delay as the root of the problem. This discourse accepts the existence of climate change but justifies inaction or insufficient efforts to combat it, potentially using misinformation. In ongoing debates about necessary actions, responsible parties, and urgency, advocates of climate delay push for minimal action, focus on alleged or potential negative social impacts of climate policies, and question the feasibility of mitigation.

The report identifies four major anti-science clusters as significant spreaders of misinformation narratives. Notably, within these groups, COVID-19 skeptics and climate skeptics overlap structurally and in the content they share. This overlap could be relevant in the Croatian context for detecting potential consumers and spreaders of climate misinformation.

Recognising the necessity for systematic monitoring of climate crisis issues and particularly climate misinformation, Faktograf, in partnership with the University of Zadar, is implementing the project “Facts about the climate crisis - klima.faktograf.hr”. This project, co-financed by the Electronic Media Agency as part of the National Recovery and Resilience Plan, aims to establish a fact-checking system for information related to the climate crisis. The primary goal is to strengthen society’s resistance to climate misinformation and enhance media literacy regarding climate information. The central activity of the project involves the creation of a specialised thematic platform at klima.faktograf.hr. This platform will systematically monitor the topic of climate and climate misinformation, offering an analytical perspective on climate crisis issues, and will feature a detailed presentation of the history of climate change denial and misinformation narratives about the climate.

To gain a better understanding of climate misinformation in Croatia, the project “Facts about the climate crisis - klima.faktograf.hr” plans to conduct the first targeted survey on citizens’ attitudes towards the climate crisis and their acceptance of climate misinformation in Croatia. The University of Zadar will carry out this survey.
The analysis of climate misinformation fact-checked by Faktograf during its eight years of operation looks into present climate misinformation and maps actors and channels for disseminating misinformation in Croatia. We also hope that the analysis will contribute to a better understanding of the fundamental misinformation narratives observed in the Croatian digital and media space.

METHODOLOGY

In its journalistic work to check the factual accuracy of claims, Faktograf uses a methodology that complies with the codes of standards for fact-checking, which were adopted by the International Fact-Checking Network (IFCN) and the European Fact-Checking Standards Network (EFCSN). Both networks have verified Faktograf’s compliance with the stated standards.

Faktograf’s work methodology dictates that Faktograf.hr verifies the statements of politicians and public office holders, as well as the accuracy of claims in the digital space. Topics are selected by monitoring media reports and public discussions on social networks, with a focus on addressing questions of public interest.

When assessing accuracy, Faktograf.hr employs various categories of sources, including official sources (data and reports from public institutions and other authorities), scientific research, data from civil society organisations and international bodies, opinions from relevant experts, and information from media sources. Digital tools are utilised to track sources and verify data. Faktograf.hr primarily relies on primary sources in its work and strives to reference a diverse array of relevant sources on the topics it covers. All articles undergo review by at least one member of the portal’s editorial board before publication. Faktograf.hr publishes all sources used in its articles. In exceptional cases where publication might jeopardise a source’s security, anonymity is granted, with a clear explanation provided in the text.

When incorporating illustrations and photos into articles, care is taken to protect the privacy and safety of subjects, particularly in cases involving victims of
violence or other crimes. If necessary and possible, efforts are made to seek a response from the person or organisation that is the source of the false claim or the subject of significant criticism or accusation. This is particularly pertinent in cases where statements are incomplete or could be misunderstood.

For the purpose of this analysis, content published on the Faktograf.hr portal from its inception in 2015 until August 31, 2023, or the start of the “Facts on the Climate Crisis - klima.faktograf.hr” project, was examined. Articles dealing with climate misinformation, under the tags “climate”, “climate changes”, and “climate crisis”, were singled out. During this period, a total of 123 articles on this topic were published, of which 90 were fact-checking articles. The majority of these fact-checking articles focused on claims made in the public space, particularly those made by digital media and social media users, as featured in the Debunked column. It is noteworthy that a significant number of these articles were utilised within Meta’s Third-Party Fact-Checking programme. As part of its programme, Meta independently, and in accordance with its own rules, limits the reach of posts that independent fact-checkers, including Faktograf.hr, evaluate with one of four ratings: “incorrect”, “partially incorrect”, “lacking context”, and “altered photo/video”. If publishers subsequently correct the information that was initially rated as incorrect, their rating will be withdrawn.

Due to widespread misinformation regarding the nature of Faktograf’s work within the Third-Party Fact-Checking programme circulating among social media users, it is crucial to emphasise once again that Faktograf, along with other fact-checkers in the programme, lacks the authority to influence user accounts on social networks. Any actions related to user accounts fall exclusively within the domain of Meta, following their community standards and other established rules.

In addition, we point out that all the data we present in this analysis point only to the fact that when monitoring the virality of topics in the digital space, Faktograf.hr observed the above-mentioned misinformation, and do not speak of the general prevalence of climate misinformation among the public. In this regard, as part of the project “Facts about the climate crisis - klima.faktograf.hr”, the University of Zadar will conduct research on the presence of climate misinformation in Croatia.

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1 The programme and description of the work of fact-checking organisations participating in Meta’s programme is explained in detail here: [https://www.facebook.com/business/help/2593586717571940?id=673052479947730](https://www.facebook.com/business/help/2593586717571940?id=673052479947730).
In the literature we consulted for this analysis, various taxonomies of climate misinformation have been cited, revealing different observed narratives. The classification of climate misinformation varies depending on the methodology and sample used. For the purposes of this analysis, we decided to use the CARDS taxonomy as presented in the paper “Computer-assisted classification of contrarian claims about climate change”, written by Travis G. Coan, Constantine Boussalis, John Cook & Mirjam O. Nanko, published on 16 September 2021 in Science Reports 11. This taxonomy encompasses the narratives opposed to climate change and proved sufficiently comprehensive and appropriate for the purposes of this analysis. The aforementioned taxonomy was also used by Climate Action Against Disinformation in the report “DENY, DECEIVE, DELAY (Vol. 2) Exposing New Trends in Climate Mis- and Disinformation At COP27”.

For the purposes of this analysis, we have adapted the taxonomy to fit our needs in the way that we have used tags that the authors of the taxonomy call super-claims, and applied them to found misinformation to detect dominant narratives. In Faktograf, we define a narrative as a story that is placed in the public space with the purpose of imposing the desired interpretation of certain events, and which may or may not be factually accurate and grounded. In the case of this analysis, we are talking about climate misinformation narratives.

The taxonomy lists five contrarian super-claims which we used to define climate misinformation narratives:

- **Global warming is not happening**
- **Human Greenhouse Gases are not causing global warming**
- **Climate impacts are not bad**
- **Climate solutions won’t work**
- **Climate movement/science is unreliable**

The authors of the taxonomy branch each super-claim into sub-claims, which further branch into sub-sub-claims. We use these claims and sub-claims to describe climate misinformation narratives, but we did not use them to classify the claims we collected in our sample.

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The misinformation climate narrative “Global warming is not happening” includes claims that deny that the planet is warming, such as claims that Arctic sea ice is not melting and glaciers are not disappearing, that we are approaching an ice age, that the weather is cold, the oceans are not warming, that claims about sea level rise are exaggerated, and that extreme weather events are not more frequent than before, i.e. that extreme weather events existed before, but were not associated with climate change, and, ultimately, that the number of deaths/damages from extreme weather events does not increase.

The misinformation climate narrative “Human greenhouse gases are not causing global warming” includes a series of claims that, while acknowledging...
the fact that climate change is occurring, deny that it is caused by human action. On the one hand, these misinformation narratives claim that these are natural cycles for which there is also historical data, i.e. that the climate is influenced by, for example, solar and/or geological action, and on the other hand, they present a series of incorrect claims that there is no greenhouse effect, as well as incorrect statements about carbon dioxide (CO$_2$).

The misinformation climate narrative “Climate impacts are not bad” includes claims that global warming is beneficial or does not adversely affect life on Earth, and that ocean acidification is not serious.

The misinformation climate narrative “Climate solutions won’t work” includes a series of claims that inaccurately, and/or without evidence, show the effects of climate public policies. For example, they claim incorrectly and/or without evidence that these policies are harmful, ineffective, difficult and complicated and that they negatively affect certain groups of citizens because they lead to increased costs and job losses and threaten individual freedoms and the market, and even the capitalist system as such. At the same time, they claim that future generations will be richer and better able to adapt to climate change, and therefore serious measures are not necessary. Additionally, it includes claims that clean energy and biofuels are too expensive, unreliable, counterproductive, and/or harmful, while fossil fuels are cheap, good, and safe for society, the economy, and/or the environment, just like nuclear power.

The misinformation climate narrative “Climate movement/science is not reliable” includes claims that scientific consensus does not exist and claims that climate science is corrupt and biased. It also includes conspiracy theories that science is engaged in falsifying data to falsely show that climate change exists and/or that science is using advanced technology to produce extreme weather events to create the illusion of climate change. It is claimed that powerful elites are behind this, who want to control the world through climate change. This misinformation narrative also includes claims with the aim of defamation of various actors dealing with the issue of climate change, such as international institutions, the media, activists and politicians, and their alleged hypocrisy if, for example, they use air transport for travel.

During the analytical processing of the sample, we also noticed cases of incorrect claims, mostly related to extreme weather phenomena, which in their essence, do not necessarily deny the existence of a climate crisis. We called the mentioned misinformation narrative “Overemphasis of extreme weather
This misinformation climate narrative, unlike the previously described ones, does not aim to deny nor minimise the seriousness of climate change. Instead, it involves presenting certain climate and/or weather phenomena incorrectly or out of context, portraying them as unusual and/or alarming. In some instances, false claims are made about the occurrence of unusual and/or alarming climatic and weather phenomena. While these claims in some cases may intend to highlight the issue of climate change, their lack of factual foundation has a harmful effect on public debate. They can be used as an argument to support the notion that the danger posed by the climate crisis is unjustifiably overemphasised.

It is crucial to note that this narrative can contribute to inaccurate accusations of so-called “climate alarmism”. Such accusations are occasionally employed by climate change deniers or relativisers. When discussing climate alarmism, they refer to climate change data being falsified or exaggerated, used out of context, or misrepresented to induce fear or alarm among people. Their objective is typically to deny the scientific consensus on climate change and/or influence public policies aimed at mitigating damage and adapting to climate change. As a general guideline, whenever someone declares specific data or public policies as a product of so-called climate alarmism, it is essential to verify the facts behind their claims and determine whether it falls within the realm of climate misinformation narratives.

3 How climate alarmism accusations work is shown in the article “Analysis of 'The Alarming Thing About Climate Alarmism'” on the Climate Feedback portal (a verified IFCN signatory). The article deals with the text of Bjørn Lomborg, whose claims about climate change were verified by Faktograf.
ANALYSIS

General characteristics of published articles

From its inception in 2015 until August 31, 2023, Faktograf.hr has published 90 articles evaluating the accuracy of claims in the digital space related to the concepts of climate, climate change, and climate crisis. In the initial years of its work from 2015 to 2017, Faktograf.hr focused on publishing research and analytical texts on climate change. The first article specifically about climate misinformation in our sample dates from autumn 2018. During 2019, we recorded a significant increase in the number of published articles on this topic up to 10, followed by a decrease to 9 articles in 2020, and 3 articles in 2021. These figures are logical considering that the globally dominant topic during 2020, 2021 and in the first half of 2022 was the pandemic of the COVID-19 disease. In the second half of 2022, Faktograf published as many as 32 articles on climate misinformation, and in the first eight months of 2023 alone, 35 of them. Among all the published articles, four were published in the Accuracy Check section and refer to fact-checking of the claims made to the public, public figures or politicians, while the remaining 86 articles are published in the Debunked section, in which we expose misinformation and use it within the framework of Meta’s Third-Party Fact-Checking programme.

The occurrence of climate misinformation checked by Faktograf corresponds to the observed shift of actors who frequently publish misinformation about the COVID-19 pandemic to the topic of climate change. The connection between these two topics can be seen, for example, in the claim about a potential “climate lockdown”, that is, in the connection of epidemiological measures to combat the COVID-19 virus with measures to mitigate climate change.

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4 In the live blog on misinformation about the coronavirus, we published a total of 867 articles from the beginning of the pandemic until 1 September 2023.
5 Similarly, Mato Brautović notes in the report “Mapping climate misinformation ecosystem in Croatia and Slovenia” (2024) that more than half of the identified purveyors of misinformation about the climate also previously spread misinformation about the COVID-19 disease pandemic.
6 The entry of the phrase “climate lockdown” into public space and its abuse among conspiracy theorists are described in detail in the analysis of the Institute for Strategic Dialogue (ISD) “Climate Lockdown and the Culture Wars: How COVID-19 sparked a new narrative against climate action” (2021), by Eisha Maharasingam-Shah and Pierre Vaux.
Yep, 20 degrees now is sooo much hotter than 20 degrees 6 years ago. The temperature has NOT changed in the last 60 years! We can laugh at this all we want, but remember - covid madness will be replaced by climate fascism that will try to destroy us equally!!! (LINK)

Now that the Wuhan coronavirus (Covid-19) hoax is over, the World Health Organization (WHO) is busy devising its next tyrannical scheme in the form of another round of quarantines, this time to stop "climate change". Recently proposed amendments to the International Health Regulations (IHRs) and the so-called Pandemic Agreement include what is known as the "One Health" approach. The One Health scheme will grant the WHO absolute "authority" to initiate "climate locks" at such a time when "global warming" is determined to be too great a threat to ignore. (…)

The next round of WHO-supervised quarantines will be far worse than covid quarantines. WHO head Tedros Adhanom Ghebreyesus will be able to exercise unbridled authoritarian tyranny over everyone around the world, forcing people to stay inside and “stay safe” indefinitely. (LINK)
Equally, we notice that the number of climate misinformation increases in situations of extreme weather or other events such as floods, fires and the like, when said events are either minimised by being attributed to normal natural processes or linked to conspiracy theories according to which they are deliberately caused by various human manipulations (HAARP, chemtrails, geoengineering and the like), or are even part of God’s punishment for human action.

I noticed something and I have to write about it to you. All the storms that happened in the past days were formed in the Alps behind Venice, and in that part, the tunnel/accelerator from CERN passes under the Alps. The storms are simply stampeding from there, ... here is another one that just arose from the same place and is heading towards southern Italy and Dalmatia. (LINK)

Beautiful, beautiful clouds in Argentina. Natural, of course. All of you who think otherwise are ordinary paranoid conspiracy theorists (LINK)
The largest number of climate misinformation in our sample is not original misinformation related to the Republic of Croatia, but is part of globally present climate misinformation and accompanying narratives, as well as conspiracy theories. A good indicator of how misinformation spreads, including those related to climate issues, is the case from July 2023, which concerns the then Spanish Minister for Environmental Transition and Demographic Challenges and Deputy Prime Minister Teresa Ribera. Misinformation originally published in Spain and going viral throughout Europe, states that she arrived at the environmental conference by private plane, and then, for marketing reasons, got out of the car and rode a bicycle for the last 100 metres to the conference venue. The Spanish fact-checking media Maldita.es, which exposed this misinformation, in its report on social media trends during the 2023 Spanish parliamentary elections, states that this false claim was the most viral misinformation during those elections. It was also translated into English and shared on profiles with a large number of followers often associated with far-right political options. In some cases, the publication of this misinformation collected up to 16.2 million views with just one publication on the social network X. The misinformation spread to other languages, for example German and Russian, and thus reached Croatia. This misinformation was also passed on in Croatia by MP Marin Miletić.

If we look at the ratings assigned to the statements from our sample, we see that incorrect statements predominate, in just over two-thirds of the cases (70%), followed by the rating that the statements lack context (in 22% of the cases). Six claims (7%) were partially incorrect, while only one modified photo appears in our sample, but in several cases, it is about manipulations or providing incorrect or insufficient context of individual photos and/or videos.
About half of the articles in our sample refer to claims made in the media, including both mainstream and fringe media, while the other half refer to claims made on social media. It should be noted here that, as a rule, these media also published links to articles on social networks, but we were guided by the place of origin of the misinformation within the Croatian-speaking area. In a third of the cases, the claim is made by a user of the social network, whether they transmit information from foreign media, from other users or create content independently, with profiles or pages on Facebook dominating in our sample, some of which are anonymous.

Mainstream media appear rarely in our sample, and most often when they report politicians’ statements, with the exception of Dino Kolega's article in Jutarnji List, and a clip from the TV show On the Edge of Science, which is broadcast on Croatian Radio and Television, and transmitted by some pages on Facebook.

Local or specialised media in our sample appear in only two cases, namely the Gospodarski list and Istramet, which wrote about the impact of CO$_2$ on the climate.

Among the fringe media, we can see that the climate misinformation is being spread by the same media that often publish various misinformation, and were especially exposed during the COVID-19 pandemic. The Epoha portal appears most often, followed by Provjeri.hr, Transformation of Consciousness 2012, Narod.hr, Paraf.hr, Liberal.hr and others. Among the mentioned portals, Narod.hr has by far the highest number of visits. According to the Similarweb service, Narod.hr had about 2.9 million visits during October 2023, which places it in 21st place among the most read portals in Croatia.

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7 Mainstream media in the scientific literature refers to “a social system made up of specific heritage media organizations that are themselves defined by specific, often hierarchical, organisational structures and traditional publishing routines. They fulfil a social function by enabling public discourse by providing topics of general interest, focused on facts, selected by professional actors and published in accordance with professional rules” (taken from: Matej Mikašinović-Komšo, “Is misinformation profitable: an analysis of the financial models of alternative media that spread misinformation”, Gong 2023). We consider fringe media to be those internet sites that present themselves as media, but operate outside the so-called media mainstream, and often do not adhere to professional journalistic standards in their work. They are often non-transparent in terms of ownership and editorial structure, the contributions they publish are often unsigned, and they regularly publish manipulative and misinformation content. The purpose of their work is not to exercise the public's right to access information of public interest, but to monetise sensationalist content and/or promote the agenda of certain interest groups. At the same time, it should be noted that certain fringe media are registered in the Register of Providers of Electronic Publications in accordance with the Electronic Media Act and the Media Act, while others are so-called are self-declared media and do not comply with the aforementioned legal provisions, but are internet sites that present themselves as media.
They are followed by Paraf.hr with around 136,000 monthly visits, Provjeri.hr with 63,000, Epoha with 55,000, Liberal with 54,000 and Transformation of Consciousness 2012 with only 4,500 monthly visits. All the mentioned portals have pages on social networks, predominantly on Facebook. Transformation of Consciousness 2012 has the largest number of followers on that social network - as many as 196,000 (which is in significant discrepancy in relation to the number of monthly visits to the portal). They are followed by Narod.hr with 64,000 followers, Liberal.hr with 33,000, Provjeri.hr with 18,000, Epoha with 16,000 and Paraf.hr with only 3,200 followers (also in discrepancy with the number of visits to the portal). Epoha is also active on Telegram, where its channel is followed by more than 6,500 users. Provjeri.hr has a little more than 3,600 subscribers on the Telegram channel, Transformation of Consciousness 2012 has about 1,500 subscribers, and Paraf.hr a little more than 500.

The Croatian ecosystem of fringe media that publish various misinformation, and whose content Faktograf monitors, has been relatively stable for a long time and clearly follows global and regional trends in the field of misinformation, which indicates the fact that various types of misinformation are part of a wider global field of conspiracy theories and/or populist discourse that often flirts with extreme political ideas.

Pages and profiles on Facebook that appear in our sample in almost half of the cases are profiles of private users unknown to the public, but their content is publicly available. Then, in the sample there is a significant number of anonymised profiles and pages for which it is not known who maintains them\(^8\) and, ultimately, there are several private profiles known to the general public\(^9\), whose content is also publicly available.

From the anonymised Facebook profiles and pages that had two posts in our sample, the following were found: Capakova Zamjenica (13,000 followers), Pinokio VelikogNosa II (1,800 followers), Živčana Žirafa (1,700 followers) and Novo Normalno (11,000 followers, inactive since the beginning of 2022). The remaining Facebook pages and profiles in our sample appeared only once.

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8 Facebook does not allow searching for private profiles, nor does Faktograf base its articles on the content of user profiles that are closed to the public. At the same time, if such a user profile published, for example, a link to some misinformation or shared content containing misinformation, Facebook's system will mark that link with a fact-check link and inform the user that he shared misinformation.

9 The Facebook profiles or pages of journalist Boris Mišević, activist Andrija Klarić, physicist Danijelo Grgićin and blogger Igor Kostelac appear in the sample.
Narrative analysis

For the purposes of this analysis and insight into misinformation narratives, claims that Faktograf.hr dealt with in its articles were used. It should be noted that when classifying claims according to misinformation narratives, we were guided by an assessment of the primary goal of claims containing misinformation. At the same time, in certain texts from which the claims are taken, other narratives are also introduced, but it was estimated that they are secondary. This assessment was made in such a way that the focus was placed on the claim that served as a basis for fact-checking, while we considered the narratives from the argumentation that serve to support the said claim as secondary.

By classifying the claims according to the narratives as defined by the CARDS taxonomy, we determined that the most represented misinformation narrative is “Climate movement/science is not reliable” with a share of 44%. It is followed by the narratives “Human greenhouse gasses are not causing global warming” with 18% and “Climate solutions won’t work” with 17%. The remaining narratives appear to a lesser extent, namely “Global warming is not happening” (8%), and “Climate impacts are not bad” (3%). In addition, in 7% of the sample, the narrative that we called “Overemphasis of extreme weather phenomena” appears. In total, three articles were found in our sample through which we checked the accuracy of the information presented, and it was determined that it was not misinformation, so they were marked as “Not applicable”.

10 These are the following texts: “High temperature in Great Britain bent railway tracks”, “Plenković manipulates statistical data on the use of renewable energy sources in his message to the UN”, and “Šiljeg: More migration is caused by climate change than wars”.

18
Observing the distribution of narratives, the misinformation narrative “Climate movement/science is not reliable” dominates in our sample with slightly less than half of the claims (44%). However, it should be noted here that texts and publications in which this narrative is primary sometimes additionally include claims that fall under other misinformation narratives, such as “Climate change does not exist” and “The impact of climate change on life on Earth is not harmful”, which they serve to support the narrative that climate science is unreliable. 

The misinformation narrative “Climate movement/science is not reliable” first of all aims to raise doubts about climate science and consequently scientists, which then leads to an easier penetration of misinformation into the public discourse, and potentially leads to harassment of scientists on social networks and sometimes live, and can have an impact on withdrawal of scientists from the public space. The research “Global Hating: How online abuse of climate scientists harms climate action” (2023) conducted by the organisation Global Witness showed that the level of exposure to harassment is related to the number of academic publications and the frequency of media appearances by scientists. A total of 39% of surveyed scientists (183 out of 468) experienced online harassment or abuse as a result of their work on climate change issues.

$^{11}$ Examples of such cases can be found in the texts “No, the amount of polar ice is not increasing”, “Bill Gates did not admit that clean energy is a fraud” and “Mišević shares a video with an incorrect statement about climate change and tables with incorrect data”.
This rate is lower for those who have published less than six articles (24%), and increases to 49% for those who have published more than 10 journal articles. Among those scientists who appeared in the media at least once a month (13% of respondents), 73% of them experienced harassment. The possible effect of online harassment on the quality of public debate is also worrying, given that as many as 41% of affected scientists said that due to the experience of online harassment, they are less likely to post about their work on social networks in the future, while 23% said that are determined to continue reporting their work on climate issues on social media regardless of online harassment. If scientists can’t do their jobs because of the stress and fear caused by harassment, critical evidence supporting climate action and solutions is put at risk, the research points out.\footnote{12}

In our sample, too, there are claims that enter the realm of harassment and intimidation of scientists, as well as other actors.

\begin{quote}
Editors of the main media, representatives: fuck your stupid and lying mother! Chemtrails and Haarp are the only reason for big fires in the world, including those in Siberia and the Amazon! / Video (\textlink)
\end{quote}

\textquote{Strah je ono, što pokreće ljude na reagiranje. S druge strane i strah počiniljja zločina protiv prirode i čovjeka da će biti razotkriveni. Geoinženjerov je najrazorniji ljudski poduhvat ikad pokrenut, koji prevazilazi sve dosadašnje napade na prirodu. Ove stvari, koje nam cionisti ili nacisti 21 stoljeća spreju iznad glave, planovi su da nas ugušu metalom, koji infiltrira u ljudsko tijelo. Posljedice su razno razne bolesti i smrti koje nitko ne može dokazati.}

\footnote{12} This tactic of causing mistrust in actors who stand in the way of achieving their financial and other interests is characteristic of misinformation actors. We described it in detail in the case study of the attack on Faktograf during the COVID-19 pandemic: “\textit{When disinformation campaigns fuel hate and harassment}”.\footnote{12}
The misinformation narrative “Climate movement/science is not reliable” also casts doubt on the scientific climate consensus. As explained in Ana Benačić’s text published on Faktograf entitled “The old claims of the late American weather forecaster continue to fuel misinformation about the climate crisis”, the climate consensus was not created by “voting”, but by revising the views of scientists in their scientific papers on the climate and the impact of CO₂ emissions and other greenhouse gasses to the average temperature of the atmosphere and ocean. It was determined in 2004 by Naomi Oreskes¹³, a geologist and historian of science, precisely by reading revised scientific articles. The scientific consensus on climate change has fluctuated over time and fluctuated between 90 and 100 percent, and currently exceeds 97 percent, as shown by a meta-analysis of published and peer-reviewed scientific studies¹⁴, as well as surveys of thousands of scientists.

The texts in our sample that belong to the misinformation narrative “Climate movement/science is not reliable” emphasise the claims according to which there are reputable scientists and organisations that deny or minimise the reality of climate change in order to show that there is an equally valuable “other side”.

For example:

Today in the world there are a large number of top scientists who deny the planetary-global and ecological-fanatical movement of the fight against climate change (LINK)

(...) as many as 500 scientists from all over the world clearly called for the return of reason and logic (LINK)

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1,200 scientists and experts from around the world led by the Norwegian Nobel laureate in physics Professor Ivar Giaever declare: “There is no climate emergency.”

A global network of over 1,100 competent scientists and experts, led by the Norwegian Nobel laureate in physics Ivar Giaever, prepared and issued the World Climate Declaration (WCD) on June 27, 2022. The group that now functions as the “Global Climate Intelligence Group” (CLINTEL) has the task of using its knowledge and experience to achieve a balanced, impartial and competent view of climate change and to provide advice on climate change and energy transition to governments and companies around the world. (…) Climate models have many shortcomings and are not even remotely convincing as tools of global politics. They increase the effect of greenhouse gasses such as CO$_2$. In addition, they ignore the fact that enriching the atmosphere with CO$_2$ is beneficial. (LINK)
Among these claims is the claim of Nino Raspudić, at that time a columnist for the Večernji list, and today a representative in the Croatian Parliament, that “there is no absolute consensus in the scientific community regarding the very complex issue of climate change, and especially whether it is affected by human activity at all”.

As part of the misinformation narrative “Climate movement/science is not reliable”, there are also claims that incorrectly portray climate change deniers as victims:

According to the latest scientific data, which the “pro-climate” community tries to discredit, we are not even a threat, because man-made climate change does not exist. (...) While the study’s methods and results can be debated, it shows once again that there is no overwhelming consensus on man-made global warming, as the media often claims. (LINK)

The scientist who debunked the myth about the extinction of polar bears lost her job (LINK)

The misinformation narrative “Climate movement/science is not reliable” includes classic conspiracy theories about the powerful rulers of the world, which are no stranger to Croatian users of social networks and fringe media:

Chemtrails, not arsonists, initiated all the big fires because NATO planes have built-in tanks containing metallic nanoparticles that, a spark is enough, initiate all apocalyptic fires! With the aim of reducing the percentage of oxygen, i.e.
increasing CO$_2$ (Montenegro is the largest producer of oxygen) and introducing an air tax. Therefore, global warming does not exist. It is a lie, served to us by the same people who carry out climate engineering to "save" us from global warming. Greta Thunberg is doing a great job for the world’s fraudsters! (LINK)

CNN urged its viewers to start starving their pets to death in an effort to help fight climate change. No, unfortunately it’s not a joke... . (LINK)
The next most frequent misinformation narratives are “Human greenhouse gasses are not causing global warming” in 18% of cases and “Climate solutions won’t work” in 17% of cases.

Examples of claims of the misinformation narrative “Human greenhouses gasses are not causing global warming” are as follows:

- Russian scientist: The slowing down of the Earth’s rotation means that we are on the verge of a major climate change (LINK)

- CO₂ does not disrupt these patterns. What causes this is a combination of solar activity and the state of the moon’s phases. Man has nothing to do with it. (LINK)

- Scientist Milutin Milanković explained the earth’s cycles a hundred years ago and thereby proved that human activities do not affect global warming (LINK)

Examples of claims of the misinformation narrative “Climate solutions won’t work” refer in our case primarily to policies related to agriculture and urban planning, especially in the context of the concept of 15-minute cities. Some examples of that narrative are the following:

- Oxfordshire County Council has approved a ‘trial’ for climate locking to start in 2024 (…)
- Oxfordshire County Council, run by Labour, the Liberal Democrats and the Green
Party, has secretly decided to divide the city of Oxford into six 15-minute districts and approved plans to lock residents into one of those six zones to ‘save the planet’ from global warming. Namely, not a single councillor in his manifesto, of course, expressed the intention of imprisoning the local population, but instead made vague claims about how it would ‘improve the environment’. The latest phase in the ‘15-minute city’ programme is to install electronic gates on key roads at the entrances and exits of the city, confining residents to their own neighbourhoods. Under the new plan, if residents want to leave their zone, they will need permission from the council, which decides who is worthy of freedom and who is not. Under the new scheme, residents will be allowed to leave their zone for a maximum of 100 days a year, but to achieve this, each resident will have to register their car details with the municipality, which will then monitor their movements via smart cameras throughout the area.” (LINK)

“Once again, in the name of the climate, people’s menus are encroached upon. All of which the globalists will not interfere in the years ahead. We will no longer be able to make our own decisions about what we will consume. Lovely, isn’t it?”, “Edinburgh kicks meat out of schools, hospitals and care homes and makes vegan menu mandatory” (LINK)

John Kerry called for the shutdown of agriculture and animal husbandry around the world due to climate change (...) Kerry, Biden’s special presidential climate envoy, issued the warning during a conference on the green agenda in Washington. During a USDA climate change summit, Kerry told the audience that “we can’t get to zero, we’re not going to get this job done, unless agriculture is at the center and part of the solution.” Kerry warned attendees that his and other people’s “lives depend on” about shutting down farmers. Stopping farmers from growing food will reduce agricultural “emissions”, Kerry insists. He went on to note that he no longer even calls it climate change. “It’s not a change; it is a crisis”, he declared. (LINK)

Most of the claims we included in our sample border on, or directly promote, conspiracy theories, especially that of the World Economic Forum (WEF) as the powerful ruler of the world. The only claims that jump out of that pattern and try to deal with real arguments are those published by the Liberal.hr portal in an article that conveys Bjørn Lomborg’s posts on Twitter in which he argues with the former chief economist of the World Bank, Joseph Stiglitz15. One of the possible reasons for this is the fact that, in the past, the Republic of Croatia did not seriously approach the creation of policies aimed at mitigating and combating climate change16.

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15 Faktograf’s article on checking the factual basis of the claims is available [here](#).
16 More in Melita Vrsaljko’s text under the title “Croatian bureaucracy slows down the fight against climate change”. 
Is last week’s storm God’s punishment? (…)
In Zagreb, the storm hit one hospital in particular, and most mainstream media reported very sparingly about it. The storm hit the Zagreb hospital St. The ghost. The tree fell on the hospital’s emergency room, which allowed unborn children to be killed again last year due to the arbitrariness of Mayor Tomašević. Perhaps the administration of the Clinical Hospital of St. Duh should have asked why the storm did not hit any hospital in Zagreb except theirs? (…)
The ringing of church bells was absent, and we know from historical records, some of which date back to the seventh century, that the ringing of church bells protects the population from lightning strikes or hail. Last year, the ringing of church bells saved Karlovac from hail and great damage. Maybe in Zagreb they could also use this tool that has proven to be effective for warding off storms? (LINK)

Is Australia paying the price for one of the most liberal Abortion Acts passed last September? According to the law, an abortion can be performed up to the 22nd week of pregnancy or later if two doctors agree, practically until birth. We ask the Lord to extinguish the fiery element and to open the world’s eyes and soften stony and cold hearts. Evil human laws can be passed and enforced, but their consequences cannot be changed nor prevented. (LINK)
The misinformation narrative “**Climate impacts are not bad**” is the least represented in our sample, with only 3%, and an example of this narrative is the following statement:

* Agriculture can prosper (...) CO$_2$ is not a harmful gas, it is food for the plant world ([LINK](#))

The misinformation narrative “**Overemphasising extreme weather events**” appears in 7% of cases, or six times. In all six examples in our sample, it is related to extreme weather or other natural events that are presented inaccurately or manipulatively.

* Snow in Zagorje at the beginning of 6 months, this is crazy weather ([LINK](#))

(... snow in August... STUTTGART 18.08.2023 ([LINK](#))
The photo shows a BMW car that is mostly under water in the middle of a submerged street in an unnamed city. On the rear windshield, you can clearly see a sticker that reads: “Fuck You Greta!” (LINK)

CONCLUSION

This review of fact-checks published by Faktograf.hr since 2018 is a presentation of the climate misinformation that the Faktograf editorial office has observed in the digital space and among Croatian users of social networks. It points to certain occurrences of climate misinformation, but for a detailed analysis of the prevalence of climate misinformation, additional research would be necessary. In this sense, as part of the project “Facts about the climate crisis - klima.faktograf.hr”, we will conduct research on the attitudes of Croatian citizens on the climate crisis, as well as the acceptance of climate misinformation.

What we notice in this analysis is that there is a certain circle of actors among the fringe media and on social networks who regularly publish misinformation related to various topics, and among them is the topic of climate change. Very often such misinformation is presented as part of wider conspiracy theories. Furthermore, we notice that a significant amount of misinformation is taken from sources from other countries, and a smaller amount of climate misinformation
is specifically related to events in Croatia. At the same time, when we look at Croatia, the amount of misinformation related to climate change is expected to increase after extreme weather events, given that such events attract a lot of public and media attention. Purveyors of misinformation see such situations, in which the public is busy discussing recent extreme weather events in their own environment, as an opportunity to impose their desired narrative.

The most prevalent misinformation climate narrative that we have observed is the narrative “Climate movement/science is not reliable”. Publications in which this narrative is primary in some cases additionally include claims that fall under other misinformation narratives (e.g. “Global warming is not happening” and “Climate impacts are not bad”), which at the same time serve to strengthen the central thesis about unreliability of climate science. This misinformation narrative aims to cast doubt on climate science and scientists and the scientific climate consensus.

This is a tactic whose success was demonstrated during the recent public health crisis - the COVID-19 pandemic. Namely, it was precisely the level of citizens’ trust in public institutions (including science and the media) that most strongly correlated with the capacity of different states to manage the pandemic, both through curbing the spread of the disease with non-pharmacological epidemiological measures (“measures in the community”) and through the implementation of vaccination campaigns. Countries whose citizens have more trust in institutions record a higher proportion of vaccinations and a lower mortality rate than countries whose citizens have lower rates of trust in institutions. The use of misinformation for the purpose of undermining trust in scientists therefore evidently has the potential to disable, hinder or slow down the structural social changes required by the process of the so-called green transitions. In this sense, it is significant that among the most active spreaders of climate misinformation are fringe media and pages and profiles on Facebook that previously promoted misinformation related to the COVID-19 pandemic.

Also, the narrative “Climate movement/science is not reliable” leads to harassment of scientists through digital channels of communication. It has been proven that harassment can have an impact on the withdrawal of scientists from the public

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More in: Pavić, Željko and Kovačević, Emma and Šuljok, Adrijana and Jurlina, Juraj and Miškulinen, Maja and Mujkić, Aida and Miškulinen, Ivan (2023) “The deficit and contextual models of vaccine hesitancy: a test of the mediation path”, SAGE open, 13 (4), pp. 1-14. ISSN 2158-2440 (Print), 2158-2440 (Online), and in the text by Petar Vidov “Covid-19 killed more than 18 thousand people in Croatia. How did that happen?”. 
space, which further impairs the quality of public discourse and leads to an easier penetration of misinformation into the public space. It is also important to point out that this narrative abounds in claims taken from various conspiracy theories, which brings climate skepticism closer to Internet users who are otherwise inclined to believe in conspiracies. Such users are often very active on social networks, so it is possible to use them as a megaphone to amplify desired narratives, as well as for campaigns encouraging online harassment of scientists and journalists.

The findings of our analysis are consistent with the research published in January 2024 by the Center for Countering Digital Hate (CCDH). For the purposes of the research “THE NEW CLIMATE DENIAL: How social media platforms and content producers profit by spreading new forms of climate denial”, they collected text transcripts of 12,058 climate-related YouTube videos published by 96 channels over almost six years - between 1 January 2018 and 30 September 2023. The research uses the same taxonomy of climate denialism i.e., climate misinformation narratives that we use in this analysis. The data they received indicate trends similar to those shown by our analysis. The denialist claims “Global warming is not happening” dropped from 48% of all denial claims in 2018 to 14% in 2023. The denialist claims “Human greenhouse gasses are not causing global warming” is relatively stable and recorded a slight decline from 17% to 16%. The denialist claims “Climate impacts are not bad”, on the other hand, recorded an increase from 4% to 6%. The largest growth and the largest share among all denialist claims are “Climate solutions won’t work”, which recorded an increase from 9% to 30%, and “Climate movement/science is not reliable”, which recorded an increase from 23% to 35%. Researchers therefore divide denialist claims into two categories: the so-called old denial of climate change (old denial denialist claims), which is in decline, and the so-called new denial of climate change (new denial denialist claims), which is on the rise. Experts in the report suggest that the change in denialist claims i.e. misinformation narratives has occurred because the effects of global warming and climate change are becoming more visible and it has become very difficult to claim that climate change does not exist. Therefore, misinformation actors move from denying the reality of climate change and man’s influence on the climate to denying the effectiveness and expediency of measures and policies that can mitigate climate change, and work to the greatest extent to reduce trust.

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18 In 2018, the share of the so-called new denial narratives accounted for 35% of all climate misinformation narratives, while in 2023 they account for as much as 70%. In our sample, new denial narratives make up 64%.
in climate science. The [CCDH survey of US teenagers](https://example.com) from January 2024 shows that this approach to denying the reality of the climate crisis is bearing fruit. It has been shown that about a third of teenagers believe that global warming is harmless, that public policies to combat the harmful effects of the climate crisis do more harm than good, that climate science should not be trusted, and that climate change is a hoax that serves to control and subjugate people.

Non-governmental organisations and scientists who have been dealing with the problem of climate misinformation for many years propose different solutions in the field of public policies, such as regulating the work of large Internet platforms, implementing media and digital literacy programmes, and strengthening intersectoral cooperation. At the global level, climate topics are increasingly dominating the political discourse, but their involvement in the so-called culture wars creates a suitable ground for the spread of climate misinformation. At the same time, society is in a situation where it is necessary for the public debate on the climate crisis to be firmly grounded in factual reality and common sense, in order to come up with the best possible solutions for dealing with this crisis. Due to all this, Faktogräf launched the Climate Portal, wanting to contribute to the public debate with its work, producing good journalism, exposing misinformation and focusing on solutions to the climate crisis.

19 See for example the report “Deny, Deceive, Delay: Documenting and Responding to Climate Disinformation at COP26 and Beyond”.
ABOUT FAKTOGRAF

Faktograf.hr is the first Croatian media specialised in fact-checking, i.e. checking the factual accuracy of claims in public space. Faktograf is a member of the International Fact-Checking Network (IFCN), an international network of organisations dedicated to fact-checking, as well as the European Fact-Checking Standards Network (EFCSN), a European network of fact-checking organisations, and SEE Check, a network of six organisations from Southeast Europe. Faktograf was launched as a non-profit media in 2015, and after finishing its incubation period in Gong, it became independent in 2021 as the separate organisation - Faktograf - an Association for the Informed Public. Faktograf was founded by the members of Faktograf’s newsroom with the aim of promoting, developing and improving professional and ethical journalism in the public space, checking facts and suppressing misinformation in the public space, checking the accuracy of claims made in the public space by digital media and users of social networks, and with the aim of ensuring the right of the public to be informed about issues in the fields of politics, culture, social sciences, civil society, and independence of the journalistic profession. For Faktograf, fact-checking is an integral part of journalism that is specifically aimed at exposing misinformation and verifying the accuracy of information in the media (in the broadest sense of the word) and on social networks.