

A magnifying glass is positioned over a computer screen, focusing on the Facebook logo. The logo is in white lowercase letters on a dark blue background. The background of the entire image is a teal color with a halftone dot pattern. In the bottom right corner, there is a small orange square with the text 'STOP funding HEAT' in white. Below this square, there is a grey rectangular box containing the title of the report in white uppercase letters. The background also shows some blurred text from the screen, including 's ar' and 'on F'.

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**IN DENIAL -
FACEBOOK'S GROWING
FRIENDSHIP WITH CLIMATE
MISINFORMATION**



STOP FUNDING HEAT

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EXECUTIVE SUMMARY

This is Stop Funding Heat's second report in six months covering Facebook's problems with climate misinformation. May 2021's "[On The Back Burner](#)" report explored over 150 academic studies, reports and journalistic articles that exposed loopholes in Facebook's misinformation policies and provided concrete examples demonstrating the extent of the problem.

In this report, Stop Funding Heat brings fresh evidence to Facebook. With a dataset of 196 accounts and 48,700 posts, the report finds an average range of between 818,000 and 1.36 million views of climate misinformation every day. Just 3.6% of this content has been fact checked. This report also finds that Facebook continues to directly receive thousands of dollars while placing climate misinformation on its advertising platform. This issue in particular has an easy fix, was raised over a year ago, and yet nothing has been done.

Part 1, "Introduction", provides context for this report, including a background on definitions, on other relevant reports, and why Facebook needs to take swift action now, before it is too late.

Part 2, "Climate Misinformation on Organic Content", presents findings from Stop Funding Heat's extensive dataset. The report uses the latest climate communication science to identify instances of climate misinformation and exposes a large discrepancy between what Facebook says and what the data says. With a limited, English-language only dataset, conservative estimates of views of climate misinformation is already 8.2x - 13.6x the amount that Facebook sends to its own Climate Science Center (referred to as the Climate Science Information Center until September 2021). Furthermore, the data shows that interactions (comments, shares and reactions) on the worst climate misinformation posts have increased more than three quarters over 2021.

Part 2 also provides a large sample of the climate misinformation posts found throughout this research in order to demonstrate just how wide reaching and multifaceted this problem truly is. It also makes the methodology – and the science behind it – transparent.

Part 3, "Climate Misinformation on the Advertising Platform", presents 113 climate misinformation adverts that Facebook have received money for in 2021. Seven of the Pages were surfaced a year ago but have continued to advertise without intervention from Facebook. This represents a huge vulnerability ahead of COP26 – anyone could start a Facebook Page and start paying to spread lies about the climate overnight without intervention from the platform.



Part 4, “What Can Be Done?”, covers what Facebook should do next. This part is very brief because the next steps, at their core, are very simple – (i) adopt a public definition of climate misinformation; (ii) enforce it; and (iii) be transparent about progress.

In the appendices, a glossary is provided and the methodology for Parts 2 and 3 – including a more detailed exploration of the science behind climate misinformation – is covered. Facebook’s own data was used wherever possible, with estimation methodologies clearly stated in the appendices. Where external data was necessary, estimates were always made with conservatism in mind.

COP26 is the most important global climate summit yet – and the stakes on climate change are only going to get higher. Facebook has reacted too late too many times before – with Q-Anon, with Cambridge Analytica, with Covid-19, even with genocide. Facebook is late yet again, and its inaction continues to fuel the climate crisis.

The best time to act on this was years ago. The second best time is now.



PART 1 - INTRODUCTION

1.1 Why this Report - and Why Facebook?

The threat of climate change to our society and communities grows every year. According to the World Health Organisation (WHO), there are [already 150,000 deaths from climate change annually](#). In August 2021, the Intergovernmental Panel for Climate Change (IPCC) found that *“human activities are responsible for approximately 1.1°C of global warming”* and *“unless there are immediate, rapid and large-scale reductions in greenhouse gas emissions, limiting warming to close to 1.5°C or even 2°C will be beyond reach.”*

Indeed, in Facebook’s own words, *“Climate change is real. The science is unambiguous and the need to act grows more urgent by the day.”*

But over the last few years, evidence has been mounting on Facebook’s active contribution to the climate crisis. Much of this evidence was rigorously covered in a [Stop Funding Heat report in May 2021](#). In the intervening 5 months, more has appeared:

- Also in May 2021, Avaaz found an estimated [25 million views of misinformation related to climate science and renewable energy](#) within just 60 days in the USA.
- In August 2021, InfluenceMap documented how [Facebook takes money from the oil and gas sector](#) to spread messaging misaligned with the science of climate change via its advertising platform.
- Other organisations have published corroborating evidence on how adversarial narratives can spread on social media – for example, in October 2021, [The Institute for Strategic Dialogue released a study](#) on how both social media and media outlets helped a “climate lockdown” become mainstream.

This report brings fresh evidence that shows Facebook’s climate misinformation problem is not only bigger than the company suggests, but that it stands to get even worse.

It is worth acknowledging from the outset that Facebook has attained [impressive achievements](#) when it comes to its sustainability policies. Facebook also recently [announced a \\$1 million project](#) to support work on climate misinformation. But, as that same article references, the reality is that all of this activity is totally undermined by the climate misinformation it profits from in the first place. As a big tech platform, and one of the world’s largest companies, it is Facebook’s responsibility to be a net positive in this area. That means combating the problem head on. Just last month, Google [announced a policy on de-monetizing climate misinformation content](#). So, while Facebook is not the only social platform without an unambiguous policy on climate misinformation, it is the largest¹, and as such represents one of the biggest, if not *the* biggest, threat to climate action in the months and years ahead.

¹ While this report does not cover Instagram – due to the climate misinformation problem being far greater on Facebook – it is notable that Instagram also does not have such a policy.



1.2 Why Now?

The 26th Conference of Parties (COP26) in Glasgow this year is the most pivotal since the conference in Paris in 2015, as it is the first COP to take place since the Paris Agreement's measures came into effect. Governments urgently need to strengthen measures to reduce CO₂ emissions. But bad actors with vested interests will seek to stop this by any means necessary, including using social platforms to undermine science and to encourage delay.

Indeed, extensive research has found that climate change misinformation peaks with adverse weather events and during important climate policy milestones. Five examples of this were covered in May's report, such as "[climategate](#)" during COP15 in 2009; misinformation about [Australian bushfires](#) in 2020; or the [Texas Winter Storm earlier this year](#). It is also striking that engagement on the worst climate misinformation peaked in August 2021, coinciding with the release of the IPCC's latest report.

But even beyond COP26, Facebook must urgently close the loopholes that enable anyone with a phone and an Internet connection to rapidly spread misinformation. Far-reaching climate policies, such as the infrastructure bill in the USA, can [swing based on just one senator](#) – put another way, a handful of concerned citizens in a specific place. The climate cannot wait for Facebook to go about this slowly – urgent action must be taken now.

1.3 Further Background on Climate Misinformation and Related Issues

This report is the second in a two-part series. The "On The Back Burner" report in May investigated Facebook's lack of climate misinformation policies as well as the inadequacy of its general misinformation policies. It also covered important definitions, such as "climate misinformation", "disinformation", "false news" and "fake news", and documented some of the latest climate communication science outlining the real world harms that climate change causes.

The full report can be downloaded via [this link](#).

1.4 About Stop Funding Heat

Stop Funding Heat is a group of concerned individuals committed to making climate misinformation unprofitable. We do this by exposing misinformation about climate change in the media and on social media platforms, and by encouraging brands to avoid advertising with the worst culprits. To learn more about the campaign, or to contact us, visit www.stopfundingheat.info

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**PART 2 - CLIMATE MISINFORMATION ON
ORGANIC CONTENT²**

**UP TO 1.36 MILLION DAILY VIEWS
OF CLIMATE MISINFORMATION ON FACEBOOK**

**THIS IS 13.6x TRAFFIC FACEBOOK SENDS TO ITS
CLIMATE SCIENCE CENTER
BASED ON FACEBOOK'S OWN DATA**

**ONLY 3.6% OF CLIMATE MISINFORMATION FACT
CHECKED
WITH AN ADDITIONAL 10.7% LINKING TO THE
CLIMATE SCIENCE CENTER**

**76.7% INCREASE IN INTERACTIONS PER POST
THIS YEAR ON THE WORST CLIMATE
MISINFORMATION**

**NEWS PAGES MAKE UP 67% OF ENGAGEMENTS
DESPITE ACCOUNTING FOR ONLY 4% OF CLIMATE
MISINFORMATION POSTS**

² Organic content is content that originates on the timelines of Groups and Pages without any payment to Facebook. The majority of content on Facebook is organic.



2.1 Climate Misinformation Viewed Millions of Times Daily

This section makes use of a dataset of English-language Groups and Pages that are known to publish climate misinformation, downloaded from Crowdtangle. The dataset covered eight months, from January to August 2021 and totalled exactly 48,701 posts.³

From this dataset, an estimated 38,925 instances⁴ of climate misinformation were identified. Between them, these posts gained a total of 10 million interactions (likes, reactions, comments and shares)⁵.

Although Crowdtangle does not provide information on impressions, by assuming a (conservative) average interaction rate of 3-5%, this has been estimated to be between 827,000 and 1,380,000 daily.⁶

Though this sounds like a large figure – and it is – it is a far more meaningful in context. Since September 2020, Facebook's main publicity on its efforts to tackle climate misinformation have focused on its [Climate Science Center](#) (CSC)⁷. Facebook's theory of change is that its [Third-Party Fact-Checking Program](#) reduces the amount of misinformation on the platform, while the CSC simultaneously helps connect people to the correct scientific information on climate. In May 2021, Facebook claimed it was *"connecting more than 100,000 people every day to reliable information from leading organisations through our Climate Science Information Center"*. This figure was recently re-stated in [September 2021](#).

CLIMATE MISINFORMATION - A DEFINITION

Climate misinformation refers to deceptive or misleading content that:

- Undermines the existence or impacts of climate change, the unequivocal human influence on climate change, and 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.

This definition has been adopted by a group of leading researchers in civil society and follows the latest climate communication science.*

This report has chosen not to count cases of industry lobbying, nor the practice of framing business functions or efforts as supportive of climate change that in fact contribute to climate warming (also known as greenwashing). See Appendix A1.3 for more information on excluded cases.

³ All data was downloaded on September 30th, 2021.

⁴ While the majority of posts in the dataset were made by Pages and Groups that exclusively post on climate misinformation, a narrative filter and sampling method was used to arrive at an estimate for the remainder. See Appendix 2 for more information.

⁵ Interactions only refers to reactions (including likes), comments and shares, but not other popular engagements, such as link clicks, photo views, video views, event responses and so on.

⁶ This methodology is very conservative, as the average interaction rate is likely much lower. In Appendix 2 several studies that justify these figures are referenced.

⁷ As referred to earlier in the report - the name was changed from "Climate Science Information Center" to "Climate Science Center" in September 2021.

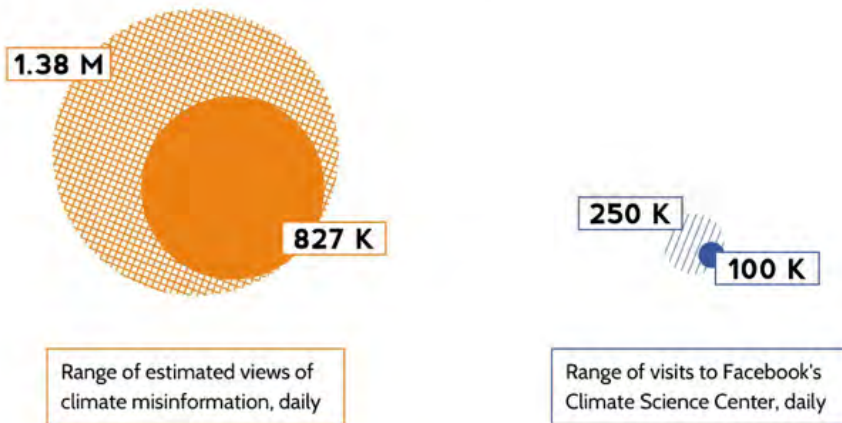
* (From pop out) See Treen, O'Neill, Williams (2020), Coan, T. G., Boussalis, C., Cook, J., & Nanko, M. O. (pre-print, 2021) and Stop Funding Heat's previous report (2021)

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This means that the amount of climate misinformation found in this report's limited, English only dataset is 8.2x - 13.6x the amount of visitors Facebook sends to its flagship Page on climate science globally. Even if Facebook's theory of change was perfect, there are clearly problems with the execution.

Even with a generous assumption that "more than 100,000" could mean something like 250,000, this would still mean an estimated 3.3x - 5.5x of climate misinformation compared to visits to the Climate Science Center.

13 TIMES MORE HARM THAN GOOD?



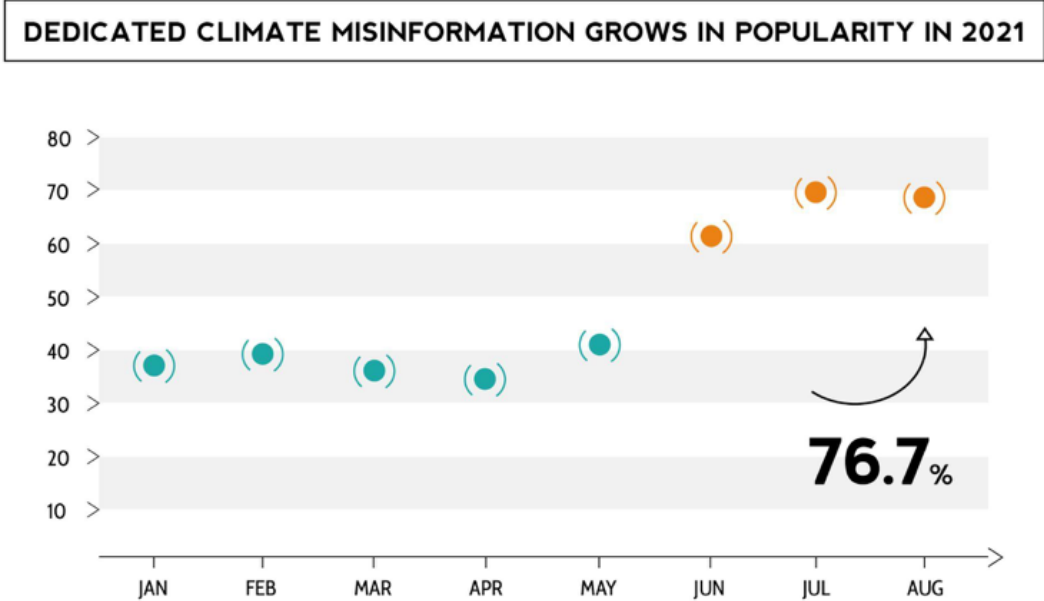
Estimated views of climate misinformation from 195 Facebook Pages and Groups is 8.2x - 13.6x more than visits to Facebook's Climate Science Center



2.2 Engagement On Most Clear Cases of Climate Misinformation Grew During 2021

41 Pages and Groups in the dataset exclusively post climate misinformation. In the methodology appendices these are referred to as “single issue” Pages and Groups, but they could be more colloquially understood as “full-time” or “dedicated” climate misinformers. These Pages and Groups tend to post the most “obvious” climate misinformation, as shown at the end of this section.

Looking at the posts only from these single issue Pages and Groups unearths a worrying trend – total interactions from all posts have been increasing over the year. In January 2021 there were a total of 165,000⁸ interactions on these posts recorded by Crowdtangle, while in June, July and August 2021 there were 226,000, 226,000 and 241,000 respectively – between a 37.0% and 46.2% increase. In the same period of time, the total quantity of posts actually decreased. Thus, average amount of interactions per post rose substantially. Comparing the last three months of the dataset (June, July and August 2021) to the first three months (January, February and March 2021), the average interaction per post for single issue Pages and Groups increased 76.7%.



Average interaction (comments, shares, reactions) per post for the Pages and Groups that only post climate misinformation on Facebook. The 76.7% rise compares the average across June, July and August 2021 to January, February and March 2021.

⁸ Figures rounded up and down to the nearest 1,000.



Worthy of note, this subset of content alone represents an estimated 119,000 to 197,000 of misinformation views daily⁹ – this is already more than Facebook sends to its Climate Science Center.

Facebook's Third Party Fact-Checking Program allegedly checks climate misinformation content. However, when looking at these posts, only 9.1% had a fact-checking label applied.¹⁰ Additionally, only 10.6% of posts had a link to the Climate Science Center. This means that less than 1 in 5 of the worst climate misinformation has any intervention from Facebook – or, conversely, 4 in 5 are posted without any intervention from Facebook.

Given this study is on English-language only Pages and Groups, and considering that [87% of fact-checked content on the platform is in the English language](#), this is cause for even more concern. The already poor intervention rate is likely much lower globally.

For a sample of climate misinformation found in this part of the dataset, see the first part of section 2.4.

⁹ This is another estimate based on the same methodology as before – see Appendix 2 for more information.

¹⁰ Content checks prioritised top content as well as a secondary random sample – see Appendix 2 for more information.

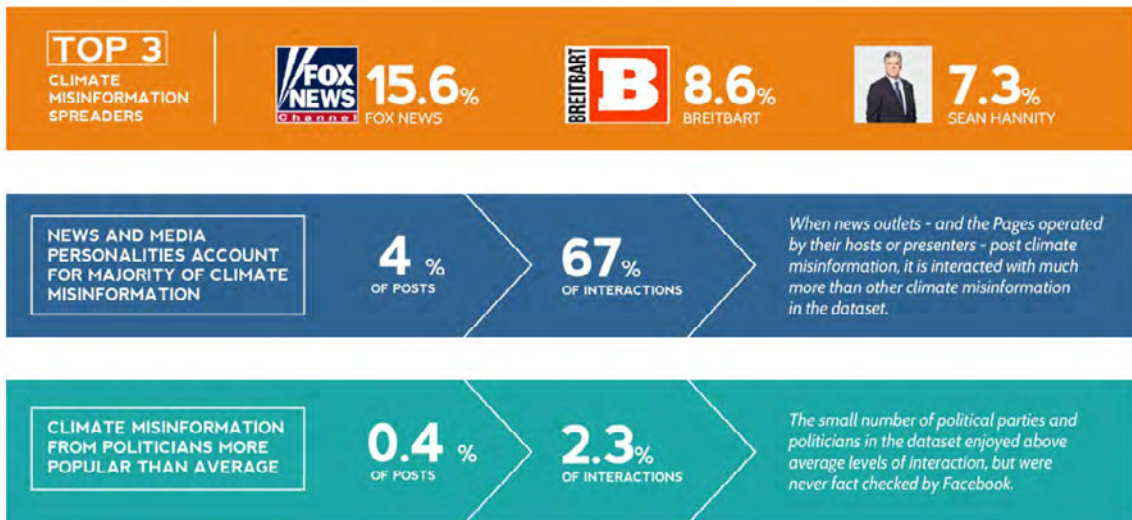


2.3 Facebook's Fact Checking Loopholes Responsible For Majority of Climate Misinformation

154 Pages and Groups in the dataset post climate misinformation amongst other content. These are referred to as “multi-issue” Pages and Groups in this report, or they could be colloquially considered “part-time” climate misinformers.

As it is a large group overall, three distinct sub-categories were created within it to help find trends: 1) “News and Media Personalities”, which covers news outlets as well as Pages associated with the anchors and radio / television hosts of those outlets; 2) “Politics”, which includes political parties and politicians; and 3) “Other”, any Pages not included in these other two categories, which tends to include think tanks, Pages created by individuals or groups of unknown users, as well as all of the Facebook Groups in the multi-issue dataset.

Despite only accounting for 4% of the estimated climate misinformation posts, the “News and Media Personalities” sub-category accounted for 67% of estimated total interactions on the content. Meanwhile, though political Pages were not a big focus of this study, their 2.3% of estimated total interactions was also far larger than the total 0.4% of estimated climate misinformation posts.



This means that when “News and Media Personalities” and “Politics” Pages post climate misinformation, it is interacted with much more than the average misinformation post in our dataset.



Part of the reason for this is likely due to Facebook's fact checking loopholes, where news Pages (or Pages masquerading as news outlets) as well as politicians are protected by loopholes. This is well reported on, and covered extensively in Stop Funding Heat's [previous report in May 2021](#).

It is no surprise, then, that the climate misinformation identified in "News and Media Personalities" was fact checked only 1.4% of the time, with a Climate Science Center label added 10.4% of the time. Meanwhile, politicians were never fact checked – in keeping with Facebook's policy – although Climate Science Center labels were added 21.7% of the time.

Before showing a sample of climate misinformation from this section of the report, it is worth acknowledging that Facebook do not necessarily align with this report's definition of climate misinformation. This, if true, is part of the problem. Some of the following content, particularly in the multi-issue dataset, tends towards "subtler" forms of climate misinformation – for example, claims that green policies threaten national security or are too costly; that politicians or environmentalists who care about climate change are exceptionally corrupt/deluded; or that clean energy is exceptionally unreliable.

That the misinformation is more subtle does not make the content any less problematic or any less harmful. Indeed, there is a possibility that this kind of content is more harmful due to its more persuasive potential. This reality is becoming more apparent the more it is studied – for example, a podcast from the BBC published just weeks before this report, on October 23rd, 2021, covers this specific kind of misinformation as problematic and discusses "*softer, more insidious forms of denial*" such as "[delay](#)", "[division](#)", "[deflection](#)" and "[doomism](#)".

The categorisation of climate misinformation in this report follows the [latest climate communication science](#) as well as an accepted definition from a number of organisations in civil society ahead of COP26 – see Appendix 1 for more details.



2.4 Climate Misinformation Samples

SINGLE
ISSUE

Marjorie Taylor Greene

The Earth's climate has always changed, and there is NO amount of taxes or government that can change it.

Government is not God.

The Green New Deal by @AOC is just another communist manifesto.

It should be burned along with all these masks we are forced to wear.

Climate Crisis? There is NO Climate Crisis!

Greta Thunberg
-16 years old
-Not a scientist
-Reads from a script
-Gets 24/7 media coverage

Dr. Judith Curry
-Climatologist
-Has published over 140 scientific books
-Says it's all a hoax
-Gets no media coverage

This is what media manipulation looks like.

Friends of Science

UN/IPCC will be at it again today with the fake news fawning all over another prediction that will have the same fate as the past ones. https://order-order.com/_/un-has-been-predicting-/

UN'S FIFTY YEARS OF ECO-DOOM WARNINGS

"We have ten years to stop the catastrophe"

"an environmental catastrophe as irreversible as any nuclear holocaust"

"We shall win - or lose - the climate of the world in the first years of the 10th century"

ORDER-ORDER.COM
UN Has Been Predicting Planetary Disaster for 50 Years
The UN has been predicting planetary disaster for decades, usually scheduled to happen in ab...

Global warming is a natural cycle and there's nothing we can actually do to stop these cycles. The world is now facing spending a vast amount of money in tax, to try to solve a problem that doesn't actually exist.

- Dr David Bellamy

ALL THE SNOW WILL BE GONE IN THE ARCTIC BY 2013?

SNOW-COVERED BEACHES IN GALVESTON, TEXAS 2021

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wattsupwiththat
20 May · 🌐

Guest Post by Willis Eschenbach Lots of folks are up in arms about some rumored "CLIMATE CRISIS!!!" or "CLIMATE EMERGENCY!!!" These terms refer to all the terrible things that are supposed to happen when we get 2°C warmer, or 1.5°C warmer, than the "pre-industrial" temperature. Greta Thunberg, for example, keeps screaming about how we only have ten years to save the planet...

<https://wattsupwiththat.com/2021/05/20/the-1-5c-hysteria/>

WATTSUPWITHTHAT.COM
The 1.5°C Hysteria
Guest Post by Willis Eschenbach Lots of folks are up in arms about some rumored "CLIMATE C...

Bjorn Lomborg · 8 August · 🌐

UN routinely warns us that we have just a few years left until catastrophe:
In 1972, half a century ago, Maurice Strong, first UN Environment Programme director warned that
the world had just 10 years to avoid catastrophe
See below for similar limits for 1982, 1989, 1990 — and of course again, in 2019
<https://enrivel.dn.se/sox/?searchterm=maurice..>

1972: UN "environment protection boss" warns:

"We have ten years to stop the catastrophe"

👍 1.3K 649 comments 1.5K shares

Man Made Climate Change is a HOAX!
Public group · 7.3K members

👤 [Profile] · 28 February · 🌐

EWARTSWANDBOROUGH.COM
'Acceleration' In Sea Levels Found To Be False - Artifact Of Switching Satellites
This may explain why Obama and Bill Gates each bought oceanfront properties.

👍 45 171 comments 10 shares

Climate Action · 11 August · 🌐

THERE, I FIXED IT

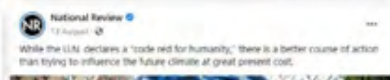
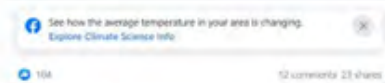
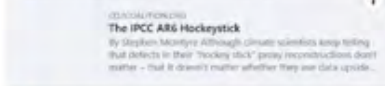
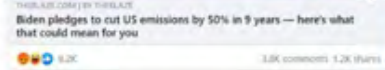
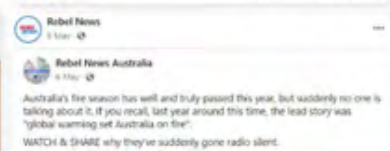
NO MORE GLOBAL WARMING

See how the average temperature in our area is changing.
Report Climate Change Now

👍 1.1K 16 comments 1.4K shares




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Anti EU - Pro British
21 August · 🌐
<https://www.conservativewoman.co.uk/cattle-cause-global.../>





CONSERVATIVEWOMAN.CO.UK
Cattle cause global warming? What a load of bull | The Conservative Woman

👍👎👤 107 29 comments 3 shares

Dinesh D'Souza
27 January · 🌐
In a statement that ignores science, Biden's climate adviser says that climate change is "the most significant public health challenge of our time."

WH Climate Adviser: Climate Change Is The Most Significant Public Health Challenge Of Our Time
See how the average temperature in your area is changing. Explore Climate Science info
146 comments 378 shares

spilled
8 January · 🌐
"Cold denial" is a gross term, it equates those who question lockdown restrictions with those who deny the Holocaust. It shows the offensive depths to which some will sink in order to silence debate and dissent, says Frank Furedi

We need scepticism more than ever
In a world of diagnostic certainty, are everything from lockdown to climate change...
UK Politics uncovered
11 likes · 🌐

Guido Fawkes
26 July · 🌐
Energy bills to rise £400 a year to cover cost of net zero target
<https://www.mirror.co.uk/news/energy-bills-to-rise-400-a-...>

115 102 comments 61 shares

1000 years ago the earth was warm, 300 years ago it was cold. In the 1st & 2nd IPCC reports these events were mentioned. In 2001 they disappeared ...

Acclaimed Israeli Astrophysicist Suggests The Sun Drives Earth's Climate, Not CO2 - Electroverse.net
20 20 comments 18 shares



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Dan Bongino
29 May · 🌐

How do you stump a liberal? Just ask them, "Why?"

SEASIDE HEIGHTS, NJ

EYE ON EARTH

CBS THIS MORNING

CRITICAL CLIMATE MOMENT?
JEFF BERARDELLI ON NEW TEMPERATURE WARNING & CHALLENGES TO BIG OIL

RUMBLE.COM

CBS Climate Analyst Tries To Defend His Climate Fear Mongering, It Goes Poorly

👍❤️ 26K 2.6K comments 3K shares

Breitbart · 17 February · 🌐

Being a rich eco-hypocrite Hollywood elite like Chris Hemsworth means riding on private jets while lecturing all us peasants about global warming.

SPORTS ILLUSTRATED

Climate Activist and "Thor" Star Chris Hemsworth Takes Second Private Jet Flight in a Week.

👍❤️ 1.4K 1.2K shares

NO Greens - Real Conservation, Not Green Lies · 19 May · 🌐

MILKED IT!

Bill gates and A.O.C. are now claiming that a cow emits more pollution than a car. Allow me to propose this:

I'll lock myself in a garage overnight with a cow.

They can lock themselves in a garage with a running car.

In the morning, we can meet up to discuss the results.

👍❤️ 2.7K 229 comments 1.2K shares

Sean Hannity · 17 April · 🌐

"THIS IS REAL"

HANNITY.COM

HOLD YOUR BREATH: Kerry Says 'We Have to Get Carbon Dioxide Out of the Atmosphere' | Sean Hannity

👍❤️ 22K 18K comments 3.5K shares

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Cautious Optimism
8 April · 🌐

"For three principal reasons, his [Biden's] jobs plan will create full employment in China.

First, Biden will create substantially more demand for Chinese materials to go into America's planned physical infrastructure improvements.

Second, the large corporate tax increases he proposes will drive even more businesses out of the U.S. -- and across the Pacific.

Third, Biden's "green energy" ideas will eliminate one of the crucial advantages American manufacturers now have: cheap energy"



GATESTONEINSTITUTE.ORG

Biden Is Determined to Create Jobs... in China
For three principal reasons, his [Biden's] jobs plan will create full employment in ...

Climate Change Debate
Public group · 1.0K members

Matt Iverson
25 April · 🌐



152 comments 269 shares

The Australian Tea Party
23 June · 🌐

OLD STUPID ALARMIST CRAP HAS BEEN SHOWN TO BE CRAP FOR DECADE AFTER DECADE ... SAME DEBUNKED SCAM REPEATED ENDLESSLY IS STILL CRAP ... THE EVIDENCE IS OVERWHELMING.

U.N. Predicts Disaster if Global Warming Not Checked
PETER JAMES SPIELMAN June 29, 1989

UNITED NATIONS (AP) - A senior U.N. environmental official says entire nations could be wiped off the face of the Earth by rising sea levels if the global warming trend is not reversed by the year 2000.

1.2K 140 comments 14 photos



PART 3 - CLIMATE MISINFORMATION ON THE
ADVERTISING PLATFORM

**FACEBOOK ACCEPTED PAYMENT 113 TIMES
TO SPREAD CLIMATE MISINFORMATION ON ITS AD-
VERTISING PLATFORM**

**11.7 TO 14.1 MILLION VIEWS
ACCORDING TO FACEBOOK'S OWN FIGURES**

**"CLIMATE CHANGE IS A HOAX"
AMONG THE PHRASES USED IN ADVERTS**

**1 YEAR SINCE FACEBOOK WAS INFORMED
ABOUT THE ISSUE - NO ACTION HAS BEEN TAKEN**

**ADS WITH DISCLAIMER NOT FACT-CHECKED
ANY MORE THAN THOSE WITHOUT**



This section of the report uses the [Facebook Ad Library](#) to identify money directly paid to Facebook to spread climate misinformation on its platform.

A total of 113 climate misinformation adverts have been identified over the time period January 1st to October 17th, 2021. In almost all of these cases, climate misinformation was the main message. The adverts were predominantly shown in North America, but also in the UK, Australia, and a minority of adverts in the EU.

Using Facebook's own numbers, these adverts amounted to an estimated spend of between \$58,000 and \$75,000 and between 8.3 million and 11.7 million views. Almost all of the adverts (over 90%) had a disclaimer for [social issues, elections or politics](#), but none of the adverts in each case were fact checked or taken down.

Particularly striking is that 56 of these climate misinformation adverts, representing 78% of the estimated spend, came from 7 of the same accounts [reported by InfluenceMap in October 2020](#).¹¹ Of the 9 Pages that published climate misinformation between January and June 2020, 7 continued to pay Facebook in the first 10 months of 2021.¹² This means that, after being informed of the problem, Facebook did nothing about it, and has instead taken money to continue spreading climate misinformation throughout 2021.

In fact, a single Page – PragerU – accounts for 70% of all the spend, and 61% of the estimated views of climate misinformation, in this study. The majority of the problem is fixable in a few hours, but it remains ignored by Facebook.

A sample of the adverts found is shown below, with a table of all Pages identified in Appendix 3.

DIRTY MONEY - LOBBYING AND GREENWASHING PROBLEM PARTICULARLY PREVALENT ON FACEBOOK'S ADVERTISING PLATFORM

Our identification of climate misinformation on the ad library is consistent with the rest of the report. This means that, despite finding lobbying and greenwashing activity, we have not included it in this report. But it would be remiss to not mention the scale of this problem on Facebook's advertising platform. For deep dives into this issue see [influenceMap's report on fossil fuel adverts on Facebook](#) and [Climate Monitor's regular newsletter monitoring industry digital advertising spend](#).*

> **113**

Total adverts found containing climate misinformation Jan - Oct 2021

> **10 MILLION**

Amount of times ads were shown, according to Facebook

> **1 YEAR**

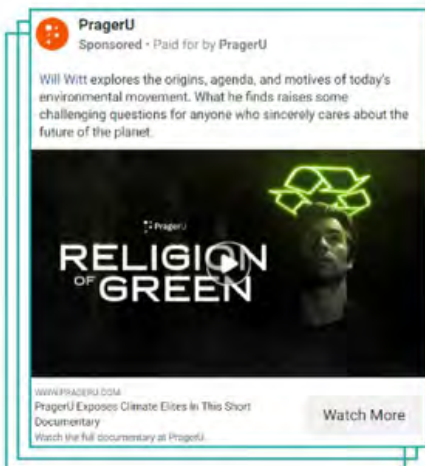
Time since Facebook was alerted about the problem

¹¹ InfluenceMap identified 51 adverts across 9 different Pages. While 7 of the Pages continued to advertise climate misinformation in 2021, the other 2 did not.

¹² The other 2 Pages did not try to publish any climate misinformation in the timeframe.
*(from pop out) InfluenceMap (2021) and Climate Monitor (various)



This single advert directly questioning climate science enjoyed estimated impressions 500,000 - 600,000 according to Facebook.



PragerU is the biggest beneficiary of Facebook's failure to fact check climate misinformation on its ad platform. Between January 1st and October 17th 2021, PragerU paid Facebook an estimated \$42,000 to \$51,000.

STOP
funding
HEAT

Turning Point USA
Sponsored • Paid for by Turning Point USA, Inc.
ID: 371943074597486

Charlie Kirk Is So Right... Conservatives Are Pro Science, While Leftists Are Pro Panic! Climate Change Is A HOAX! #ThinkForYourself

CLIMATE CHANGE PANIC IS NOT BASED ON FACTS



Climate Change Panic Is Not Based On Facts



This exact ad from Turning Point USA saying “climate change is a hoax” was flagged in InfluenceMap’s 2020 report, but at the time of writing Facebook continues to show it in exchange for payment.

The Global Warming Policy Forum
Sponsored • Paid for by The GWPF

Do you have a gas boiler in YOUR home?

You could be at HIGH RISK from the Government's Net Zero plans.

#CostOfNetZero



The Net Zero THREAT to YOUR gas boiler



The Global Warming Policy Foundation – documented since August 2020 for its climate misinformation ads on Facebook – are leading UK spending in the Facebook Ad Library in 2021. Total impressions of their #CostOfNetZero narrative were 90,000 - 105,000 according to Facebook.

Climate Realism
Sponsored • Paid for by HEARTLAND INSTITUTE
ID: 49484426950617

What do you all think the predictions will be for 2025? How about 2030? Follow Climate Realism for more climate alarmist hilarity!



Climate Realism
Interest
48,887 people like this

Like Page



Climate Realism reached accounts 1.8 to 2.1 million times so far in 2021 – making them the second biggest funder of climate misinformation on Facebook’s Ad Library.



PART 4 - WHAT CAN BE DONE?

The evidence in this report is clear – Facebook's problem with climate misinformation is worsening, and right before the most important international climate summit we have seen in years – perhaps ever.

Facebook is not just being slow to act, it is potentially engaging in its own form of greenwashing, or, at best, total naivety. Facebook's blogs on climate change tend to downplay the climate misinformation problem, instead putting its [sustainability targets](#) or [small funds for climate projects](#) front and centre. And when faced with criticism, Facebook tends to avoid addressing the points raised. For example, Facebook asserted in response to Stop Funding Heat's first report [in May 2021](#) that:

- 1) *"We combat climate change misinformation by connecting more than 100,000 people every day ... through our Climate Science Information Center, and..."* [Direct quote]
- 2) *"...working with a global network of independent fact checking partners to review and rate content"*. [Direct quote]
- 3) Analysis shows that misinformation makes up a small proportion of the overall content about climate change on the platform. [Facebook's words paraphrased by the journalist]
- 4) [It did not allow adverts rated false by its fact-checkers. [Facebook's words paraphrased by the journalist]

These statements may all be true, but they are misleading. This report has helped to give these statements better context:

- 1) 100,000 daily visitors globally to the Climate Science Center is a drop in the ocean. This report's limited, English-language only dataset contained an estimated 13x this level of climate misinformation viewed.
- 2) The Third-Party Fact-Checking Program is clearly failing to address climate misinformation. Only 3.6% of the climate misinformation checked in this report had a fact-checking label applied.
- 3) Misinformation as a small proportion of total climate change content is a misnomer – the misinformation is still harmful and problematic. What's more, Facebook has not shared its analysis. Without this, or a publicly stated definition of climate misinformation, it is impossible to know whether Facebook is counting what this report has identified.
- 4) With 113 clear cases of climate misinformation on the ad library found in this report, the Third-Party Fact-Checking Program is not working as well as Facebook is claiming.



Action is being taken by campaigners, NGOs, journalists, governments, investors and brands to convince Facebook to fix this problem. But the swiftest way to avert direct harms is for *Facebook to act quickly and decisively*. Facebook should:

1) **Go public about its definition of climate misinformation.** The definition in this report, which follows the latest climate communication science, would be a good place to start.

2) **Share its internal research on how climate misinformation spreads on the platform.** If not publicly, then at least with selected researchers, journalists and campaign groups.

3) **Produce a transparent, public-facing plan to meaningfully reduce the spread of climate misinformation on the platform.** This plan should consider:

- Community standards that do not permit deceptive statements on climate science or policy.
- A 100% transparent fact checking process that includes how climate misinformation is categorized and handled by independent fact checkers, and how it is protected from politicisation by company staff.
- Disclaimers added to all climate misinformation leading up to and during COP26, and following the guidance of climate communication science that says debunking misinformation in real time is key to stopping the spread.
- Clear and consistent standards to rapidly deplatform professional climate misinformation spreaders and deliberate repeat offenders.

4) **Bring in a total ban on climate misinformation in paid advertising on your platform.** This ban needs to be backed up by a transparent enforcement protocol.



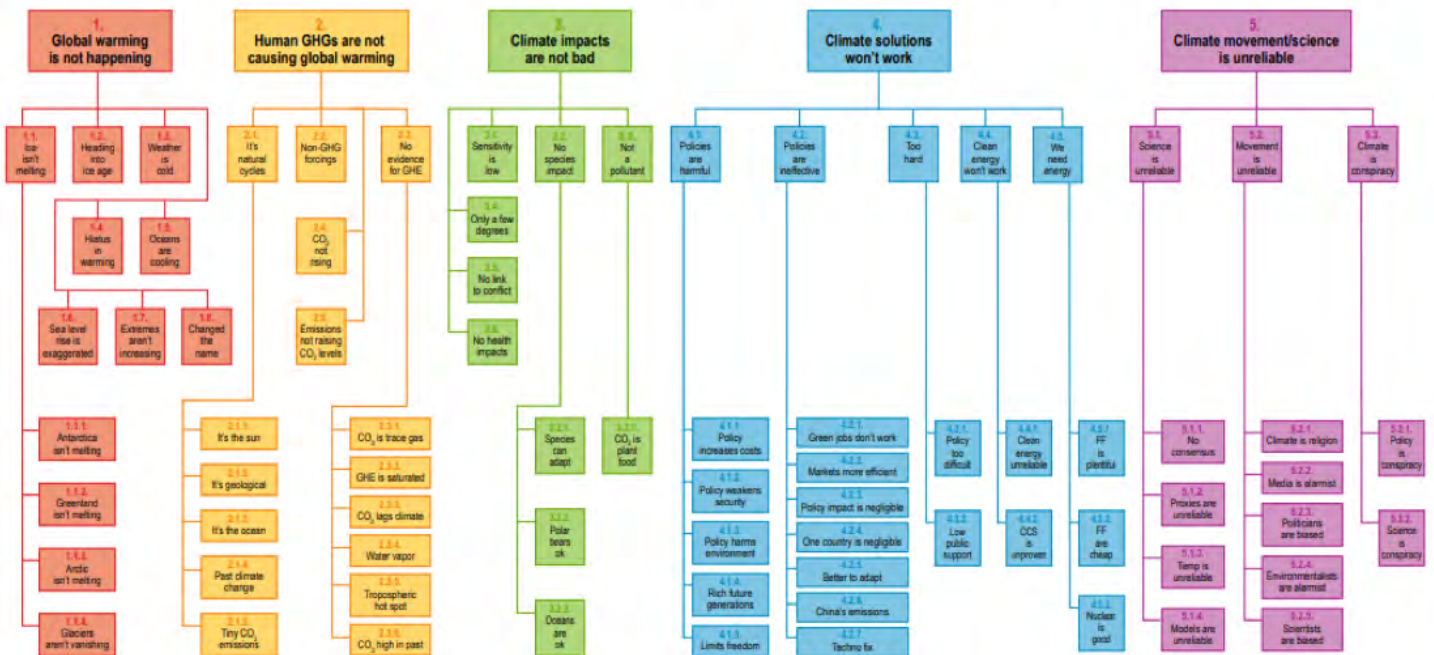
APPENDIX 1 - IDENTIFYING CLIMATE MISINFORMATION AND DIVERGENCE IN APPROACH FROM RESEARCHERS AND FACEBOOK

A1.1 Framework for Identifying Climate Misinformation

The framework adopted within this report for identifying climate misinformation follows the latest climate communication science by Coan, T. G., Boussalis, C., Cook, J., & Nanko, M. O. "Computer-assisted detection and classification of misinformation about climate change." *Nature Scientific Reports*.¹³

Specifically, the taxonomy below was referenced during all content checks, with all misinformation categorised to one of the cards.

Taxonomy of Climate Misinformation Claims



¹³ At time of writing this article was in pre-print, which can be found [here](#).



A1.2 Content Which is Misleading by Omission or Presented in a Misleading Context

Throughout this report, misleading content was counted as misinformation as long as it had a place in the above taxonomy. This kind of misinformation is not as intuitive as “true” or “false” statements, so it is worth exploring this topic in a little more detail here.

Often misinformation relies on a wider context beyond the statements or arguments being presented. To use a non-social media example, most media outlets recently agreed to [stop presenting climate change coverage with equal weight to climate deniers](#) on the understanding that climate change framed as a “debate” between two sides created a false balance effect. Even though a climate denier may not say anything “false” in these debates, the false balance in the surrounding context [often lowers perceived consensus of climate science overall](#). The idea is that the context of information is as crucial as the information presented itself. Two examples of this from this report’s dataset are presented below.

Example 1: The post below from Bjorn Lomborg contains no false claims, but is still misleading by omission. The post fails to mention a crucial element of climate science, which is the possibility of “tipping points” or “[feedback loops](#)”. Put another way, the post contains an unspoken premise that because humans have adapted to 1.1 degrees of warming, we will adapt to 1.5 and 2.0 degrees equally well. To present a counter-example to this premise, this is like saying that because water does not boil between 20 and 70 degrees, it will not boil between 70 and 120 degrees either.

Instead only one side of the argument, concluding that humans can adapt (3.2.1 in the taxonomy).

Bjorn Lomborg · 25 July

Fewer and fewer people die from climate-related natural disasters. This is even true of 2021, despite breathless climate reporting.

Over the past hundred years, annual climate-related deaths have declined by more than 96%. In the 1920s, the death count from climate-related disasters was 485,000 on average every year. In the last full decade, 2010-2019, the average was 18,362 dead per year, or 96.2% lower.

In the first year of the new decade, 2020, the number of dead was even lower at 14,893 — 97% lower than the 1920s average.

You hear a lot about all the deadly climate catastrophes in 2021 — the US/Canada heat dome, the floodings in Germany and Belgium, or the US February winter storm. All of these deaths are included in the graph.

Also included are the 559 dead from India (incl a February glacial lake outburst in Uttarakhand killing 234 and a May hurricane killing 198) and more than a thousand others. Many of these you probably haven't heard about, possibly because they're not first-world, photogenic catastrophes.

2021 is not over so the actual graph shows the likely number of dead, based on the historical ratio of climate-related deaths in Jan-Jul to the full year. This gives a preliminary estimate of 2021 climate-related deaths at 5,569 or 98.9% lower than the 1920s.

This is clearly the opposite of what you hear, but that is because we're often just being told of one disaster after another — telling us how “many” events are happening. The number of reported events are increasing, but that is mainly due to better reporting, lower thresholds, and better accessibility (the CNN effect). For instance, for Denmark, the database only shows events starting from 1976.

Instead, look at the number of dead per year, which is much harder to fudge. Given that these numbers fluctuate enormously from year to year (especially in the past, with huge droughts and floods in China and elsewhere), they are here presented as averages of each decade (1920-29, 1930-39 etc.). The data is from the most respected global database, the International Disaster Database (<https://public.emdat.be/>). There is some uncertainty about complete reporting from the early decades, which is why this graph starts in 1920, and if anything this uncertainty means the graph “underestimates” the reduction in deaths.

We are not well-informed when the media doesn't actually give us an overview of the data, but instead, just inundates us with one catastrophic story after another without context.

Notice, this does “not” mean that there is no global warming or that possibly a climate signal could eventually lead to further deaths. Global warming is a real problem that we should fix smartly, but panic from bad media reporting does not help us being smart. This graph shows us that our increased wealth and increased adaptive capacity has vastly overshadowed any potential negative impact from climate when it comes to human climate vulnerability.

This is an update of my graph in my 2020 peer-reviewed article <https://www.sciencedirect.com/.../pii/S0040162520304157>.

Climate-related Deaths 1920-2021

Global death per year, average per decade

2021 including: 624 from heat alone, 559 from 198 hurricane, 147 from US Feb storm, 16,238 from other other disasters. Adjusted to full year.

2.1K
366 comments 1.1K shares



Example 2: In this post from Nigel Farage, even the phrase climate change is not mentioned. However, arguing that green policies – in this case electric cars – are a policy exceptionally linked to national security, has its place in the taxonomy (4.1.2). The argument is presented in a misleading context, where the focus is more on national security than the climate. However, with a [contextual knowledge of Farage's statements](#) elsewhere on social media and in the press, it is understood that this post is a subtle, if somewhat indirect, effort in a long-standing campaign to delay policy on climate action.



It is worth noting that Facebook does have a “fact-checking label” for both of these posts - [“Missing Context”](#). Thus it is within the power of Facebook’s Third-Party Fact-Checking Program partners to find and rate this content appropriately.



A1.3 Excluded Cases

As with all taxonomies, edge cases were discovered, and these posts were not included in the data. The majority of “edge case” content took two broad categories:

- **Lobbying and greenwashing.** While activity from an oil and gas company to claim gas is “natural” or even a clean energy is a very real barrier to progress on climate change, this kind of misinformation is not currently directly addressed by the taxonomy used for this report, and so it was excluded.
- **Content that exclusively seeks to stoke controversy.** On several occasions, content from right-wing channels appeared that was simply a quote or genuine coverage of what a politician, celebrity or public figure said. However, because of the surrounding context on that channel – including clear, separate instances of climate misinformation – the impact of the content was often very similar. One example of a post like this with clear evidence of climate misinformation in the comments is given below.



How can Climate Change protects America from its enemies Russians and the Chinese threats

I suppose he'll ground all military planes and vehicles that run on fossil fuel, as well as discontinue feeding the troops beans and broccoli...

So many global locations experiencing coldest temperatures in decades, What a joke!

Climate change and Biden are a joke

While an argument *can* be made to label this content climate misinformation – for example, 5.2.3: Politicians are biased – the content was nonetheless excluded from the figures.



APPENDIX 2

METHODOLOGY - ORGANIC CONTENT

(RELATING TO PART 2 OF THE REPORT)

A2.1 About the Dataset

41 of the Pages and Groups identified were “dedicated” climate misinformation Pages and Groups, referred to as “single issue” Pages and Groups, while 154 posts on a wide range of topics as well as climate change were referred to “multi-issue” Pages and Groups. This makes for a total of 195 Pages and Groups (“actors”) in the dataset.

46% of the Pages and Groups monitored are based, as far as it can be known,¹⁴ in the USA or Canada (North America). 35% were based in the UK, 7.5% in Australia or New Zealand (Oceania), 1.5% in the EU, and the remaining 10% are of an unknown origin. There is a large geographical skew for a few reasons: (i) because this study was performed in English-language only; (ii) Stop Funding Heat has a better working knowledge of climate misinformation actors in North America, the UK and Australia; and (iii) climate misinformation is more prevalent in these English-language territories than other English-language territories.

The dataset was downloaded two times – once on September 1st, 2021 and again on September 30th, 2021 with improved narrative filters and a larger list of actors. The second download informs this report’s findings. To ensure fairness in findings, the timeframe January to August 2021 was agreed ahead of analysing any data and was not changed at any point during the study.

To reiterate, this dataset is by no means exhaustive, meaning the scale of this report’s findings is not considered to be the full extent of the problem.

¹⁴ Found by looking at the public Page information, or, in the case of Groups, by drawing an inference based on the location of the majority of admins.



A2.2 Estimating Total Posts and Interactions with Climate Misinformation

As the multi-issue Pages and Groups tracked are not fully dedicated to climate misinformation, a methodology was needed to estimate total posts and interactions from these actors. A three-step process was used:

(i) A dataset of all posts from single issue actors was downloaded alongside a restricted dataset of multi-issue actors. The restricted dataset only contained content potentially about climate change, using a selection of 144 climate-related keywords or phrases, such as “climate alarmist”, “carbon dioxide”, “Greta Thunberg” and “polar bear”. The full single issue dataset and the restricted multi-issue dataset were merged into one.

(ii) A content analysis was performed on a sample of the multi-issue posts flagged as climate-related in order to quantify climate misinformation content for different Pages and Groups.

- This content analysis was not fully random – content with the most interactions was prioritised first, as well as content from the Pages and Groups with the most interactions on average per post.

- After a majority of interactions in the dataset were accounted for via the content analysis, random checks were then performed until the incidence rate was stable. Ultimately, the incidence of climate misinformation was roughly the same in the random sample as in the top content.

(iii) Total climate misinformation content was then estimated by extrapolating the incidence rate of climate misinformation to the full dataset.

- This extrapolation was applied with a separate sub-weighting for four different categories to ensure as much accuracy as possible: “Single Issue”, “Multi-Issue News Media and Personalities”, “Multi-Issue Politics” and a catch-all final bucket “Multi-Issue Other”

- The extrapolation for final post estimation was based on post incidence, and extrapolation for interaction estimation was based on a weighting of interactions from the posts that were checked. For example, if 94 out of 100 posts were flagged as climate misinformation, but these posts represented 75% of all interactions in the dataset, then the final post estimate was 94% of all posts, and the final interaction estimate was 75%.

- The final extrapolation estimate was 76% of all posts and 49% of all interactions in the merged dataset arrived at from step (i).



Notes on this part of the methodology:

Ideally, the incidence rate would have been closer to 100% on posts, but this was as accurate as could be achieved within time constraints. To accommodate this, it was ensured that the incidence rate was stable – and the sample size large enough – before content checks were stopped. The final sample size of content checked was 1.05%, or 549 posts.

To double-check the robustness of findings, a secondary content analysis was run on the sub-category “Multi-Issue News Media and Personalities”, which represents 67% of all interactions in the data. Within this sub-category the top 15 Pages by interactions (accounting for over 80% of total interactions in this sub-category, or roughly 54% of all interactions in the dataset) were rigorously content checked. The post and interaction totals of these 15 Pages were weighted based on these checks. This resulted in a negligible change in numbers of interactions – just 1.87%. On this basis, the original numbers from the final part of step (iii) were kept, as the continued analysis was much less time consuming this way.

Steps (ii) and (iii) were also performed on single issue Pages, but these content checks resulted in a negligible reduction in total estimated climate misinformation posts and interactions. This weighting was, nonetheless, kept.



A2.3 Calculating Impressions from Interactions

Arriving at an estimated impressions figure is very challenging, because Crowdtangle does not provide such a figure. Estimates can be made by reverse calculating an impressions figure based on the amount of interactions content has, but, unfortunately, the most thorough industry benchmark reports do not share an impressions to interactions ratio. This is because the impressions number is private to a Page or Group's owners, and benchmarking studies cover public data. Benchmark studies therefore tend to use an "engagement rate by followers", which finds the percentage of Fans of that Page that engaged with a piece of content.

However, there are a number of limited datasets that provide an "engagement rate by impressions". These datasets tend to be owned by third party applications whose clients agree to share Page data. As these datasets have no meaningful control over a wide and fair sample of Pages, they are less reliable than benchmark studies.

Nonetheless, four studies were found with a range of results:

- [Iconosquare](#) has the number at 0.09% on average.
- [Klipfolio](#) state that "0.5%-0.99% is average" and "above 1% engagement rate is good".
- [Aamplify](#) say that "1% to 2% ... is considered good".
- [Socialstatus.io](#) puts its clients' average engagement rate at 1.96% across all Pages in September 2021.

With Iconosquare a clear outlier, it was removed from consideration. This means that assuming an average to good engagement rate would result in an impressions to engagements ratio of between 50:1 (2%) and 200:1 (0.5%).

Note that these studies cover *engagement rate* which includes a number of engagements, such as link clicks, photo views, event responses and so on, that are not included in Crowdtangle's "interaction" number (this only includes reactions, comments and shares). So the *impressions to interactions* ratio should be expected to be even higher due to a lower interaction rate.

With all that said, the impressions to interactions ratio used in this report was a highly conservative range of 33.33:1 (assumes a 3% interaction rate) and 20:1 (assumes a 5% interaction rate). Thus this report's finding of 840,000 to 1.36 million impressions a day is likely a very large under-estimate.

A2.4 Calculating Engagement Per Post on Single Issue Pages

The claim that engagements have increased on climate misinformation narratives since January 2021 by 76.7% is based only on the 30,234 posts from Single Issue Pages and Groups. This is because the incidence rate of climate misinformation is very high in this category – so high that it may as well be assumed to be 100%. This makes the findings on this statistic highly reliable via a relatively simple calculation. Introducing weighting and sample mechanics to this statistic would have been too time consuming.

Bear in mind that, although all the posts in the single issue category were considered for this one statistic (i.e. the small amount of false positives was not removed), all other statistics in this report that include single issue Pages and Groups were weighted as described in A2.2.



APPENDIX 3

METHODOLOGY - PAID CONTENT

(RELATING TO PART 3 OF THE REPORT)

A3.1 Finding Climate Misinformation Adverts

Two steps were performed to identify climate misinformation adverts in the Facebook Ad Library.

- (i) All 195 actors from the dataset were crosschecked with the Facebook Ad Library.
- (ii) Then, some limited keyword searching was performed to find any further incidents.

The vast majority of climate misinformation adverts were found via step (i).

As with the dataset outlined in A2.1, the timeframe for this part of the study was determined before looking at the data to ensure fairness. This was agreed to be between January 1st and October 17th, 2021. Thus any climate misinformation found before or after this has not been included in the report

A3.2 Total Advert Number

The total number of “ads” that were found is technically 257, but this number does not mean what most readers will intuitively understand by it. When advertisers place adverts on Facebook, they can choose to advertise the same image and copy multiple times to different audiences, with each time counting as a distinct “ad” in Facebook’s Ad Library. The exception to this are “dynamic” ads where the copy and image changes per audience. None of the adverts identified in this study used dynamic advertising.

The number 113 refers to a more intuitive understanding of an “ad” by only counting unique advert copy and images. There were a handful of times where the same ad and copy was run on a different timeframe. In these few small cases, the ad was counted as a “new” ad despite being the same, as it does signal an intention from the advertiser to “place another ad” in a way that running an advert concurrently to multiple audiences does not.

Note, as with identifying climate misinformation in organic content, edge cases were found in 24 different adverts in this part of the study, and were not included. These edge cases frequently included lobbying efforts (but not those from fossil fuel actors themselves), as well as cases where topics were broadcast in a deliberately controversial manner in order to make climate change a political or otherwise non-scientific issue. See A1.3 for more information on excluded cases.



A3.3 Estimating Impressions

Facebook provides a range of impressions for all adverts in its Ad Library, as highlighted in the example below. Estimating impressions was therefore simple – a final range was arrived at by: (i) summing up the lower range numbers of all adverts for a low range estimate; and (ii) summing up the higher range numbers of all adverts for a high range estimate.

PragerU
Sponsored • Paid for by PragerU
ID: 294203738949466

Are you fed up with the left's dishonest climate propoganda and hysteria like Tomi Lahren is? Sign this petition to tell mainstream media to stop censoring the important work of scientists and scholars.

Sign The Petition!
Scientists and scholars need our support. [Sign Up.](#)

Estimated audience size
Estimated audience size generally estimates how many people meet the targeting and ad placement criteria that advertisers select while creating an ad. [See More](#)

Estimated audience size
>1M people

Amount spent
The estimated total amount of money spent on an ad during its schedule. [Learn more](#)

Amount spent
\$1K-\$1.5K (USD)

Impressions
The number of times that an ad was on a screen. May include multiple views by the same people. [Learn more](#)

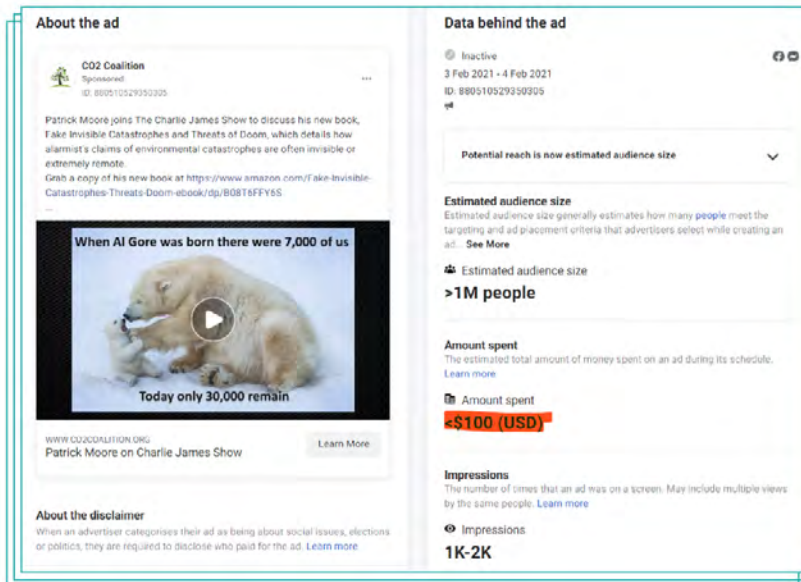
Impressions
90K-100K



A3.4 Estimating Spend

Estimating spend was done in the same way as impressions, apart from cases where the amount spent was shown simply as <100 of the local currency – see example below. In these cases, the corresponding impressions range (in the example below, 1,000 to 2,000) was converted to \$ using an \$ to impressions ratio extrapolated from the rest of the dataset. This ratio was \$5.23 per 1,000 impressions.

The average estimated spend for ads that had the \$ value assigned this way was a range of \$29-38, with the median being \$21-26. On just two occasions the estimate ended up as more than \$100, so the value was manually changed to \$99. The sum total \$ value of ads valued this way was in a range of just \$2,145 to \$3,029, or just 3.6% of the total estimated spend in the dataset.



Finally, on occasions where a complete range was provided by Facebook but an exchange rate was necessary to convert to US dollars, the blended daily average from October 22nd 2020 to October 21st 2021 was taken [from this website](#). The rates taken were £1:\$1.371885 and EUR1:\$1.194701



A3.5 Full List of Ads Found - Account Level

A full table of the accounts and associated adverts is provided below.

| <i>Name of Page (and link to Facebook Ad Library)</i> | <i>Total Adverts Found</i> | <i>Estimated Spend (Upper Range), US\$</i> |
|--|----------------------------|--|
| PragerU | 18 | \$41,600 |
| Climate Realism | 17 | \$5,994 |
| Candace Owens | 1 | \$2,500 |
| Competitive Enterprise Institute | 4 | \$2,200 |
| Life: Powered | 18 | \$1,616 |
| Heartland Institute | 1 | \$1,500 |
| Climategate.nl | 22 | \$1,153 |
| Clear Energy Alliance | 5 | \$600 |
| Global Warming Policy Forum¹⁵ | 2 | \$686 |
| Turning Point USA | 5 | \$526 |
| PolicyEd | 1 | \$600 |
| Radovan Kazda | 1 | \$119 |
| Institute of Public Affairs | 5 | \$147 |
| Texas Public Policy Foundation | 2 | \$105 |
| Uncommon Knowledge | 1 | \$52 |
| CO2 Coalition | 5 | \$31 |
| Newsbusters.org | 1 | \$47 |
| Human Progress | 1 | \$26 |
| America's Future | 1 | \$21 |
| Eric Abetz | 1 | \$10 |
| Mackinac Center | 1 | \$5 |

¹⁵ Facebook Page name changed to Net Zero Watch, but Facebook Ad Library name remains as previous.



GLOSSARY

Actors – Summary term used to describe Facebook Pages and Groups in this report's dataset.

(Facebook) Ad Library – Facebook's public library of adverts placed on its platform: [link](#).

Climate Communication Science – As with climate change itself, there is a vast body of study looking at messaging, tactics and other aspects of communications specifically related to climate change science and policy. A good starting point with regards to the history of climate change misinformation communications is [this synthesis by John Cook](#).

Climate Misinformation – Content about climate change that initially appears to be true but later is shown to be false. For a wider discussion, and an explanation of why this report does not use the terms "climate disinformation", "climate denial", "false news" and other terms, see "[On The Back Burner](#)", May 2021.

Climate Science Center – Also known as the Climate Science Information Center, this is a public information hub Facebook directs users to in order to receive up to date scientific knowledge on climate change: [link](#).

COP / Conference of Parties – A (usually) annual summit of 196 countries' / territories' governments to make, check and implement decision related to preventing and mitigating human-caused climate change.

Crowdtangle – Tool provided to researchers to understand trends on Facebook. Crowdtangle only covers public Groups and Facebook Pages. It is not possible to gather data on private Groups or personal accounts. Limited data is available on Crowdtangle – for example, see "social media interactions" below.

Edge Case – Also known as a marginal case. When categorising in this report, binary coding was required - in this case "yes - climate misinformation" or "no - not climate misinformation". Most cases are clearly and obviously in one of these categories, but an edge case is when it could, as far as the researchers were concerned, feasibly be one or the other. As stated in this report, edge cases were always coded as "no - not climate misinformation" to maintain conservative estimates.

(Social media) Engagements – This report does not calculate any data on engagements but does refer to them in contrast to impressions. Engagements on Facebook is not a consistent term but, generally speaking, is a catch-all referring to all possible engagements on a Facebook post, such as post likes, reactions, clicks, comments, shares, photo views, event responses, video views, polls, clicks on "see more" text, Page likes resulting from seeing a post, etc.

(Social media) Impressions – Amount of times content has appeared in timelines on Facebook. A good way of understanding this is to think of it as "opportunities to see". Just because content arrives in a user's timeline does not mean the user necessarily saw it, much in the same way that clicks through to a website or the Climate Science Center does not mean a person looked at or engaged with it. Note that this term is not the same as "reach", which tends to refer to the estimated number of unique accounts that had opportunities to see content. So if one user views the same content four times, this would count as four impressions but just one "reach".

(Social media) Interactions – This is a specific term for reactions (including likes), comments and shares on a post that Crowdtangle provides. It does not include any other "engagements" on posts.

Misinformation – See "climate misinformation". The same definition applies when removing the words "climate" and "climate change".



Multi-Issue Pages and Groups – One of two major categories of actor in this report's dataset. This category comprises those that are known to post climate misinformation but also post a variety of other content too. This category has three sub-categories: "News and Media Personalities", "Politics" and "Other" (generally formed of think tanks and Pages of unknown type / origin).

News and Media Personalities – One of three sub-categories of actors in the multi-issue category. It refers to all major news outlets in the dataset, as well as associated hosts, anchors or presenters. For example, Fox News is included in this sub-category, and so are Sean Hannity and Tucker Carlson.

Organic content – Content that originates on the timelines of Groups and Pages without any payment to Facebook.

Paid content – Content placed on Facebook Pages that people or organisations pay Facebook to spread, using Facebook's advertising tools.

Paris Agreement – A legally binding international treaty on climate change agreed by 196 countries' / territories' governments [in December 2015](#).

Single Issue Pages and Groups – One of the major categories of actor in this report's dataset. This category comprises those that exclusively post climate misinformation.

Third-Party Fact-Checking Program – Facebook reduces the spread of misinformation on its platform by using an "independent network of Third-Party Fact-Checking partners" to rate content. Content that has been fact checked is allegedly demoted in users' newsfeeds. More information [here](#).



STOP FUNDING HEAT, November 2021



<https://www.stopfundingheat.info>

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Written in British English with the exception of proper nouns e.g.

Climate Science Information Center

Stop Funding Heat is a group of activists committed to making climate misinformation unprofitable. We do this by exposing misinformation about climate change and its underlying causes in the press and on online platforms – and by encouraging brands to avoid advertising with the worst culprits. To learn more about the campaign, or to contact us, visit www.stopfundingheat.info