USC Annenberg
Center for Climate Journalism and Communication

Temperature Check

2023 - 2024

Climate communication lessons and forecast

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Foreword

Although scientists have been writing about climate change since the 1800s with increasing news coverage and commentary on the topic over time, climate journalism and climate communications are still nascent professional fields, emerging in this century (Refer to Appendix A). In the last 15 years, climate communication research centers at universities like George Mason University, Yale University[1] and University of Colorado Boulder[2] have contributed meaningful insights on the rise in media coverage of climate change as well as the growing awareness and acceptance of climate science. More recently, newsrooms have started to build climate units with reporters and editors on beats like environmental justice and climate solutions.[3]

The Center for Climate Journalism and Communication at USC Annenberg is focused on supporting practitioners who communicate about climate such as journalists, scientists, other experts and students. To gain a greater understanding of the needs of those communicators, and to gauge trends in the field, the Center deployed a survey to more than 1,000 people in its network including those who identified as climate journalists on the media database Muck Rack. Results from that survey reveal that:

- National media is climate communicators' dominant source for climate news, even as polls frequently show that the public has more trust in local news organizations.[4][5][6]
- The biggest challenge climate communicators face is the complexity of the climate crisis itself, followed by the abundance of misinformation and issues with the over-politicization of climate change.
- Across sectors, climate communicators prefer to measure impact in terms of public engagement over financial gain.

In the report that follows, these topics are illuminated through a detailed analysis of the survey results. We also drew upon climate journalism and communication data from other sources to paint a clearer picture of the state of these burgeoning fields.

Allison Agsten, Director
Center for Climate Journalism and Communication

Annenberg School for Communication and Journalism

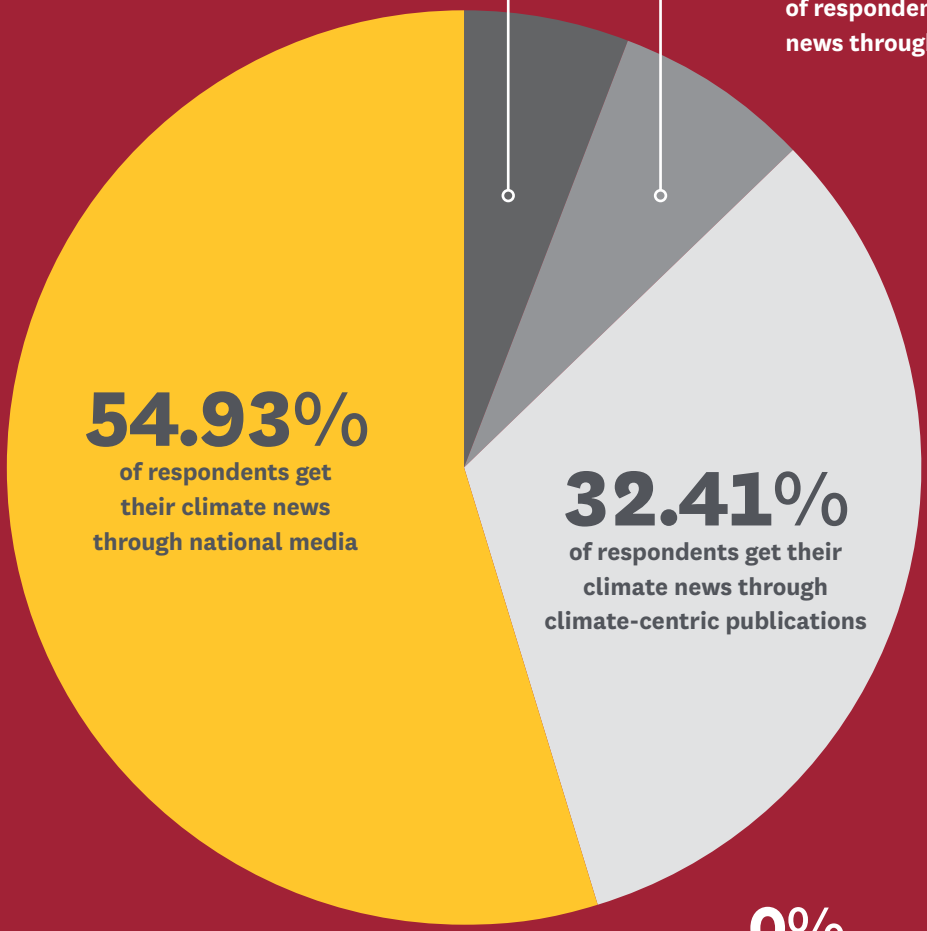
University of Southern California

Key **Findings**

1

Media Engagement

National media is climate communicators' dominant source for climate news, even as polls show that the public has more trust in local news organizations.[7]



0%
of respondents get their climate news through local media

2

Major Challenges

The biggest challenge climate communicators face is the complexity of the climate crisis itself, followed by the abundance of misinformation and issues with the over-politicization of climate change.

44.82%

Respondents who find that climate communication is challenging because climate change is too complex or overwhelming

22.41%

Respondents who find that climate communication is challenging because of misconceptions and lack of knowledge about climate change

13.80%

Respondents who find that climate communication is challenging due to apathy and lack of interest from the public

12.08%

Respondents who find that climate communication is challenging because climate change is over-politicized

6.89%

Respondents who find that climate communication is challenging due to other reasons

3

Measuring Impact

Our survey shows that across sectors, climate communicators tend to measure the impact of their work in terms of public engagement — whether through increased awareness around climate change or through direct action — over financial gain.

45.99%

of respondents said they measure impact through action and influence generated by their work

3.1%

of respondents said they measure impact through revenue or monetary gain

6.56%

of respondents had other ways of measuring impact

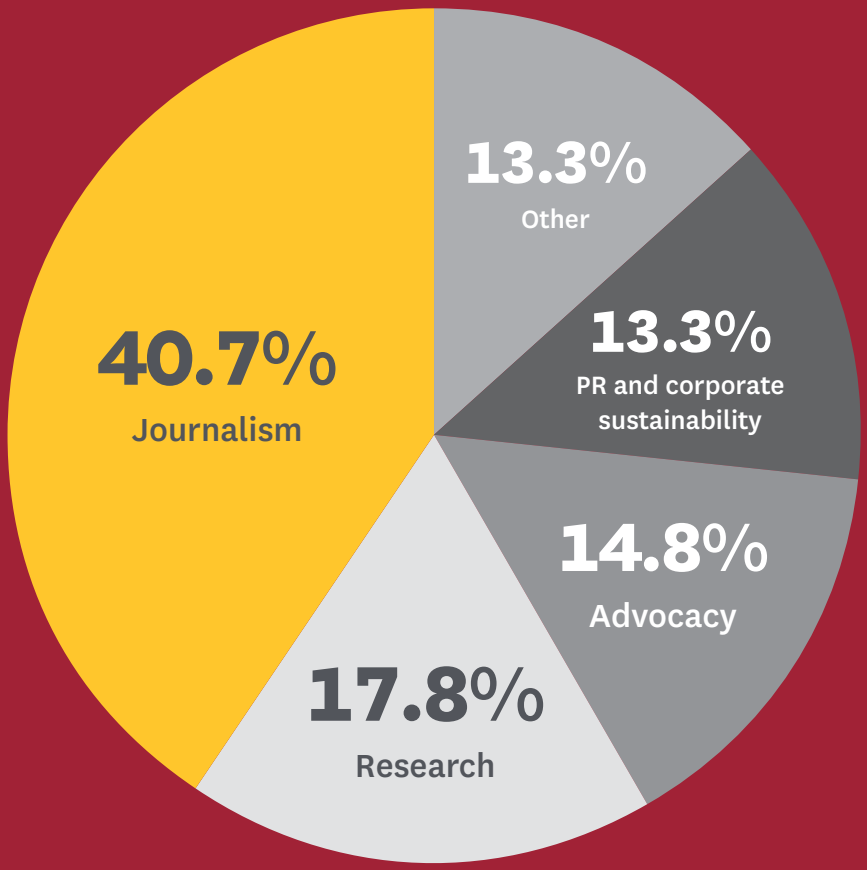
44.35%

of respondents said they measure impact through impressions and awareness of their work

Our **Respondents**

135 climate communicators from varied fields responded to this survey, including researchers from institutions like Harvard, Yale, MIT and the University of Southern California; journalists from top newsrooms across the country; public relations and advocacy experts from major firms and nonprofits as well as corporate professionals.

What sector do you work in?



Nearly one out of five journalists who responded have been trained by USC Annenberg.

Among our journalist respondents, 12.7% were from AP News and 5.5% were from ABC stations, both of which have received training from the Center for Climate Journalism and Communication.

Most of our respondents were from the United States.

3.7% of the respondents were international, from countries such as the UK, Australia and South Korea.

Media **Engagement**

How climate communicators interact with climate stories

The top way respondents received climate news was through major national media sources like The New York Times, The Washington Post, Los Angeles Times and Bloomberg.

Some said they read trade publications that specifically report on climate change and science, such as Grist, Heatmap, and Inside Climate News. None of the respondents mentioned any local publications or stations as sources for their climate updates.

A small percentage said they find their climate news through social media, but they did not specify if the post was the original source or if it was quoting another primary source.

We also asked our respondents if they engage with accounts focused on climate change on social media, and most said they do. Twitter/X was cited as the primary platform, while others used Instagram, TikTok, Facebook, Blue Sky and Mastodon.

Respondents share their top news sources to engage with climate news:

#1
New York Times

#2
Washington Post

#3
The Guardian

#4
LA Times

#5
Bloomberg Green
NPR

#6
Grist

#7
Carbon Brief
Axios

#8
PBS
Yale Climate Connections

Perceptions of climate communication

Our survey reveals that the majority of climate communicators receive climate news from big, national outlets. No local publications were mentioned, as climate still remains an underreported issue in local news.

Respondents were most inspired by the following thinkers in the climate space:

- **Bill McKibben**, environmentalist and author of "The End of Nature"
- **Daniel Swain**, climate scientist at UCLA
- **David Wallace-Wells**, climate journalist at *The New York Times*
- **Elizabeth Kolbert**, journalist and author of "The Sixth Extinction"
- **Katharine Hayhoe**, climate scientist, chief scientist at The Nature Conservancy and the author of "Saving Us"
- **Michael E. Mann**, climatologist and geophysicist at University of Pennsylvania and author of "The New Climate War"
- **Sammy Roth**, climate columnist at the *Los Angeles Times*

Insights from respondents

"Engaging with diverse climate media has helped change the narrative from 'Oh my god, sacrifice to save the world' to 'Get excited for the better products that are coming that will make your life better and also save the world.'"

Travis Niles, senior program marketing manager for conservation think tank Rare

Many said that engaging with climate media inspired them to talk about climate change more. KQED reporter Danielle Venton said in her survey response she was inspired to take action by climate researcher Katharine Hayhoe's words:

"The most important thing you can do about climate change is to talk about it more."

"We often say 'everyone should talk about climate change' or 'the most important thing to do is talk about it', but the reality is a lot of people with platforms (influencers) who might want to engage don't have the tools and the climate community is not serving them. Seeing how these nuggets have been used and adopted was really inspiring — and a reminder that there are still new messengers and audiences we can/should be working with."

Monica Dean, Climate and Sustainability Practice Director at USC Dornsife Public Exchange

WE ASKED OUR RESPONDENTS: What news sources do you turn to most often to learn about climate change?

JOURNALISTS SAID

43.32%
National Media

43.32%
Climate-Centric Media

6.68%
Social Media

6.68%
Other

RESEARCHERS SAID

77.77%
National Media

11.11%
Climate-Centric Media

11.11%
Social Media

0%
Other

CLIMATE ADVOCATES SAID

68.75%
National Media

35%
Climate-Centric Media

6.25%
Social Media

0%
Other

PR AND CORPORATE PROFESSIONALS SAID

52.75%
National Media

42.19%
Climate-Centric Media

5.06%
Social Media

0%
Other

OTHERS SAID

42.85%
National Media

14.29%
Climate-Centric Media

0%
Social Media

42.85%
Other

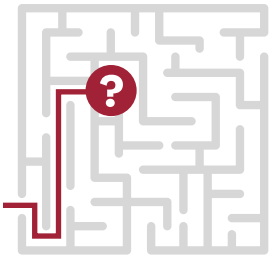
Major **Challenges**

Even though it is a regular part of their jobs, many of our climate communicators think communicating about climate change is hard. Several different factors play a role in making it a difficult task.

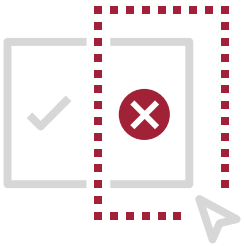
Challenges with reporting and communicating

Top three reasons why respondents think it is challenging to communicate about climate change:

1 **Climate change is too complex**



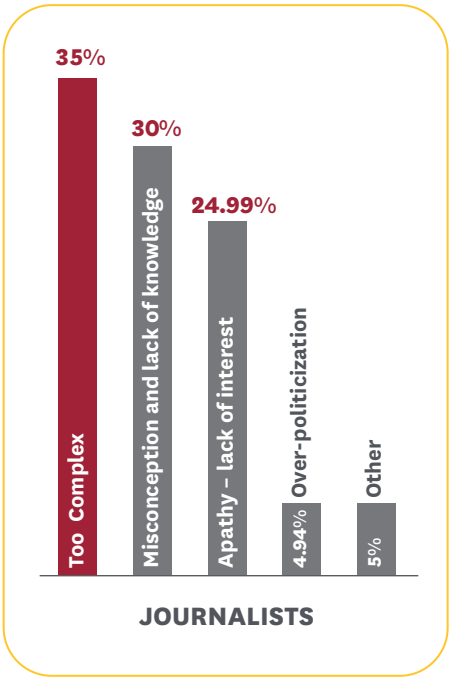
2 **Lack of knowledge, misinformation**



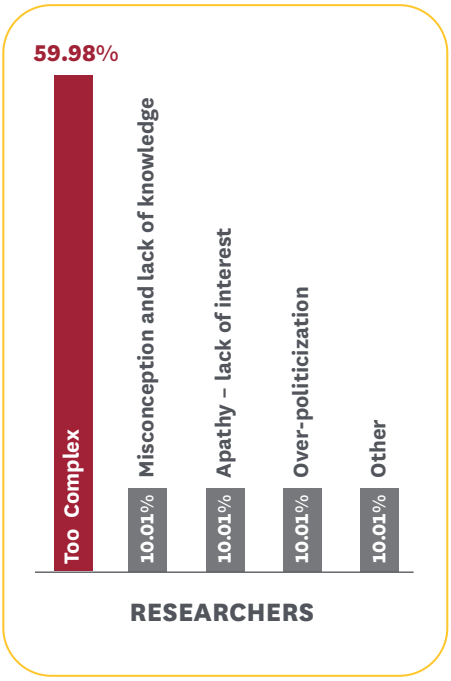
3 **Political influences**

WE ASKED WE OUR RESPONDENTS:

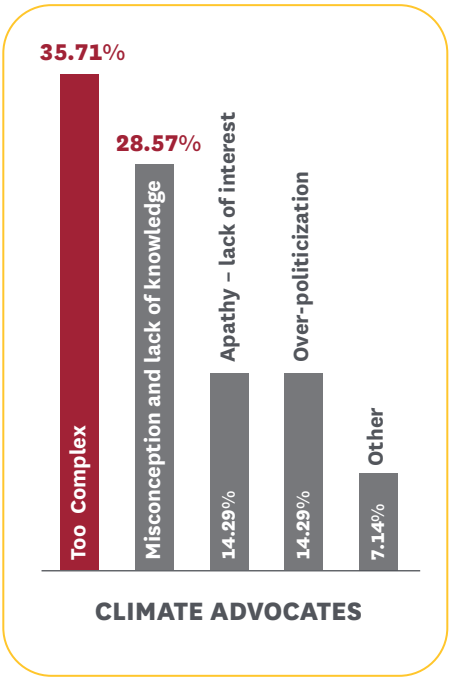
What do you think is the biggest challenge facing climate communicators today?



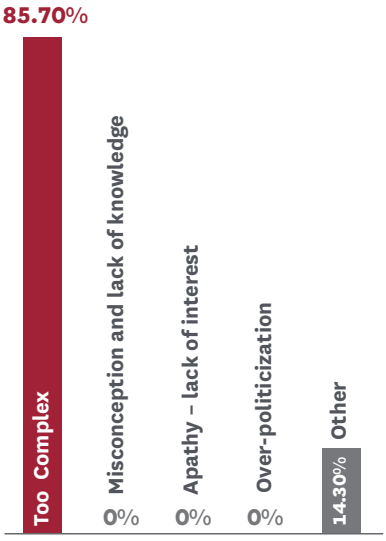
JOURNALISTS



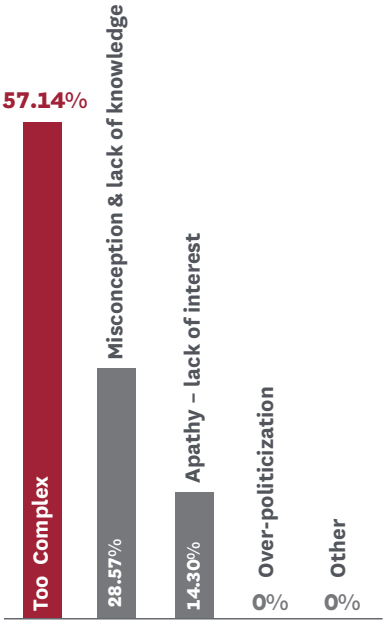
RESEARCHERS



CLIMATE ADVOCATES



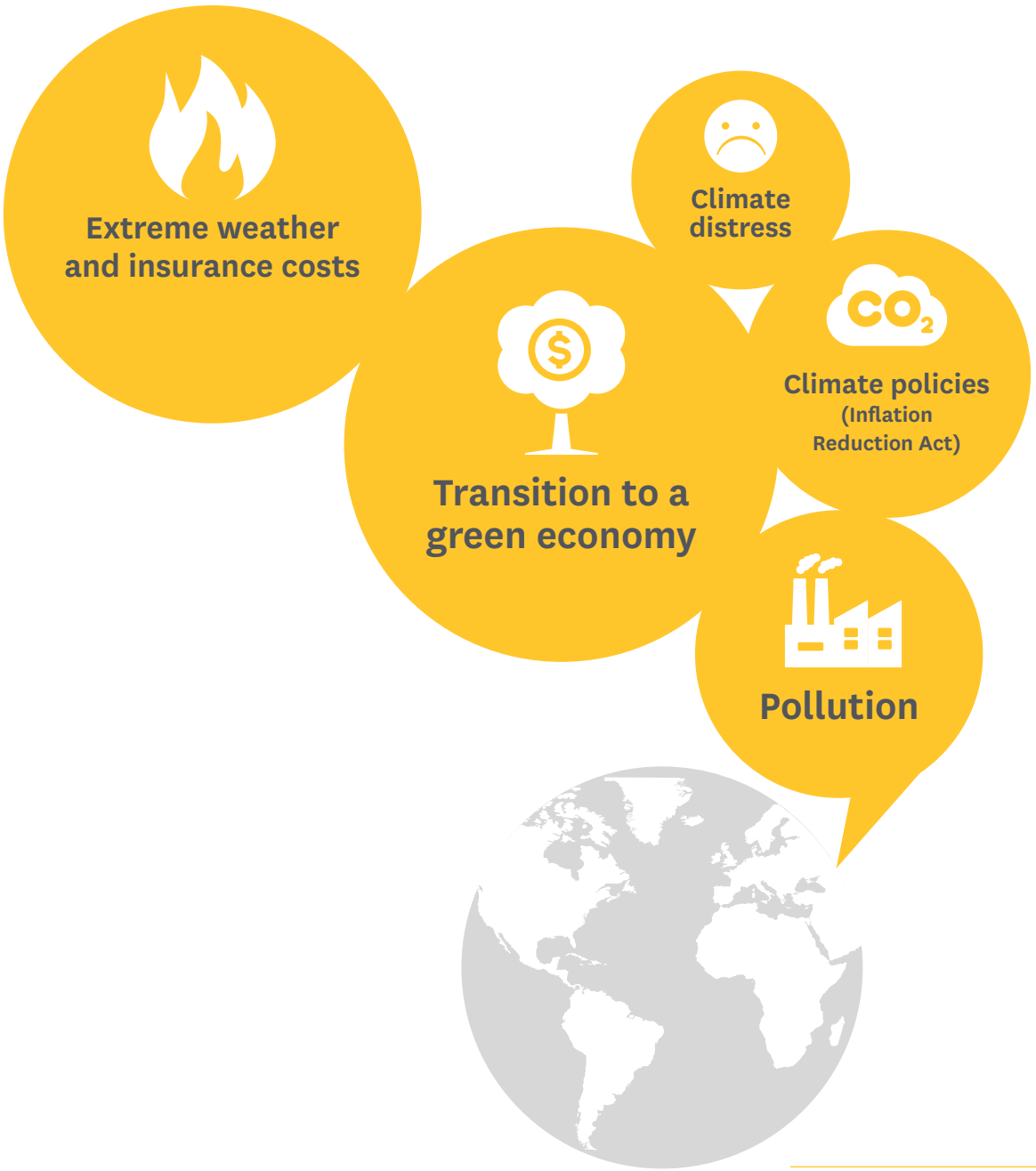
PR AND CORPORATE PROFESSIONALS



OTHER

Underreported Issues

In an open ended question, respondents cited nearly all facets of the climate crisis as issues that are underreported. Some of the major ones are listed below:



Measuring **Impact**

How climate communicators measure impact

We asked our respondents: "**What is the most important measure(s) of impact in your field?**"

The answers were varied, so we distributed most of the responses into the following three categories: **Action and Influence**, **Awareness and Impressions, and Revenue** or **Monetary Gain**.

In responses categorized under "**Action and Influence**," respondents said that the most important impact of their climate communication comes through any subsequent policy changes or environmental action from nonprofits, universities, community groups and more.

> **"Legislative or business practices change, new regulation and enforcement are all the highest achievements of impact, in my opinion."** - Susie Cagle, independent climate journalist

> **"Policy change at various levels of government, changing individual people's hearts and minds, spurring investigations."**
>
> - Erin Stone, Climate Emergency Reporter at LAist

Measuring **Impact**

In responses categorized under "**Awareness and Impressions**," respondents said that the most important impact of their climate communication comes through increased public engagement on climate issues, especially through published material, social media, campaigns, or other active work in the climate field.

> "That cultural organizations understand their role in society in light of the profound impacts of a changing climate, including both external (e.g. programming, communicating to the public) and internal (e.g. efficient or clean energy) actions."
>
> - Danielle Sakowski, program manager at Environment & Culture Partners

> "...attention, article clicks and impressions, feedback from lawmakers and stakeholders."
>
> - Michelle Alfini, climate beat reporter at WSOC

In responses categorized under "**Revenue or Monetary Gain**," respondents mentioned seeing the most important impact of their climate communication through an increase in funding or revenue.

> "Increasing frequency of funding or implementation announcements that include cultural institutions taking climate action." - Sarah Sutton, CEO at Environment & Culture Partners

WE ASKED OUR RESPONDENTS: **What is the most important measure of impact(s) in your field?**

JOURNALISTS SAID

52.37%
Awareness and Impressions

38.1%
Action and Influence

0%
Revenue or Monetary Gain

9.53%
Other

RESEARCHERS SAID

33.33%
Awareness and Impressions

58.33%
Action and Influence

0%
Revenue or Monetary Gain

8.34%
Other

CLIMATE ADVOCATES SAID

50%
Awareness and Impressions

41.67%
Action and Influence

8.33%
Revenue or Monetary Gain

0%
Other

PR AND CORPORATE PROFESSIONALS SAID

44.44%
Awareness and Impressions

44.44%
Action and Influence

11.12%
Revenue or Monetary Gain

0%
Other

OTHERS SAID

28.57%
Awareness and Impressions

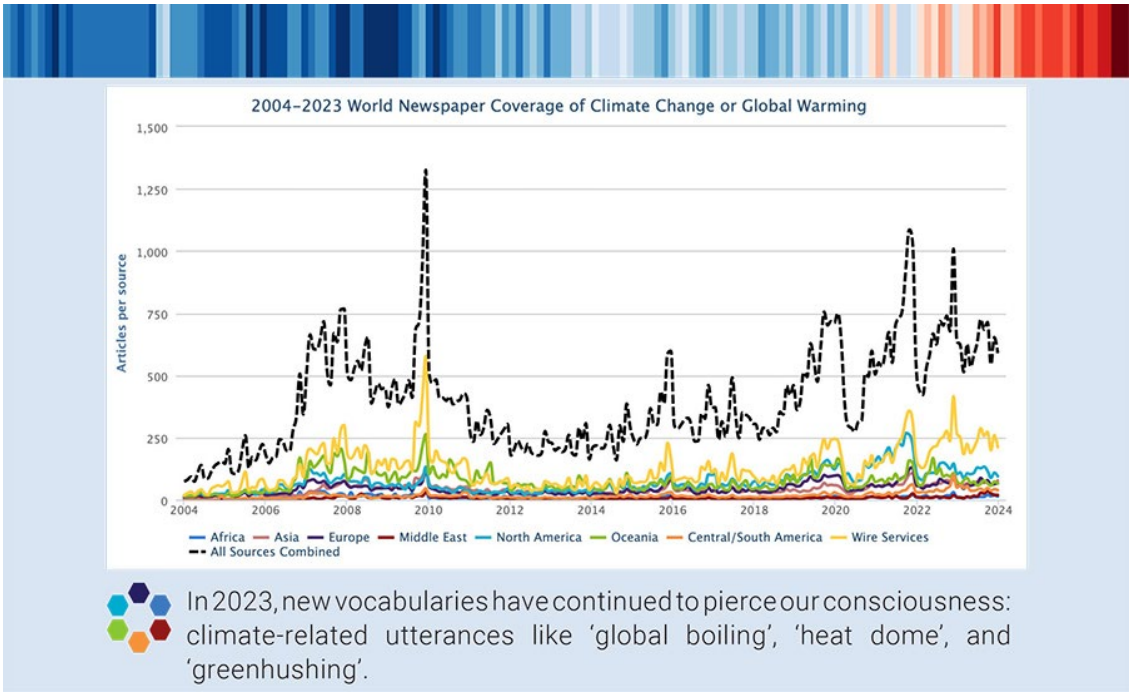
57.14%
Action and Influence

0%
Revenue or Monetary Gain

14.3%
Other

Analysis and **Forecast**

As the climate crisis grows over time and more extreme weather events force us to reconsider the way we live, the need for climate journalism has grown. News organizations have responded by increasing coverage of the topic.



The Media and Climate Change Observatory published a report in 2023 showing increasing coverage of climate change in newspapers around the world.[8]

Alongside an upward trajectory of coverage, the number of climate journalists has grown over the last few years. Tracking data on Muck Rack, the Center for Climate Journalism and Communication found that the number of climate journalists and editors worldwide grew from 800 in 2022 to 1,425 in 2023. Also via our Muck Rack analysis, we found that just within the United States, the number of journalists and editors with "climate" in their titles went up from 395 in 2022 to 801 in 2023.

Is this trajectory sustainable? In the past year, 2,700 journalists across all beats were laid off[9] and more than 130 news outlets shuttered.[10] Philanthropy has filled some gaps, such as, with the Seattle Times' new Climate Lab, funded in part by The Bullitt Foundation, Mike and Becky Hughes, the University of Washington and Walker Family Foundation. It is billed as an initiative that "explores the effects of climate change in the Pacific Northwest and beyond."[11] Footers at the bottom of stories in outlets like The Atlantic[12] and The Associated Press[13] also indicate that climate coverage at those outlets is supported by philanthropic funding.

As some newsrooms shrink and other outlets fold, it will be necessary to arm all journalists and other communicators with the skill set necessary to cover what is arguably the most important story of our time. Survey results from across the Center for Climate Journalism and Communication's training programs reveal that lack of confidence is a key deterrent in communicating about the issue across areas of professional expertise[14].

Several major newsrooms in the U.S. announced layoffs in the last couple of years

(last updated September 4, 2024)

SI
Most of the staff
January 2024

LA Times
115 people
(20% of newsroom)
January 2024

NBC NEWS
50-100 people
January 2024

TIME
30 people
(15% of staff)
January 2024

BUSINESS INSIDER
70 people
(8% of staff)
January 2024

VICE
"Several hundred"
February 2024

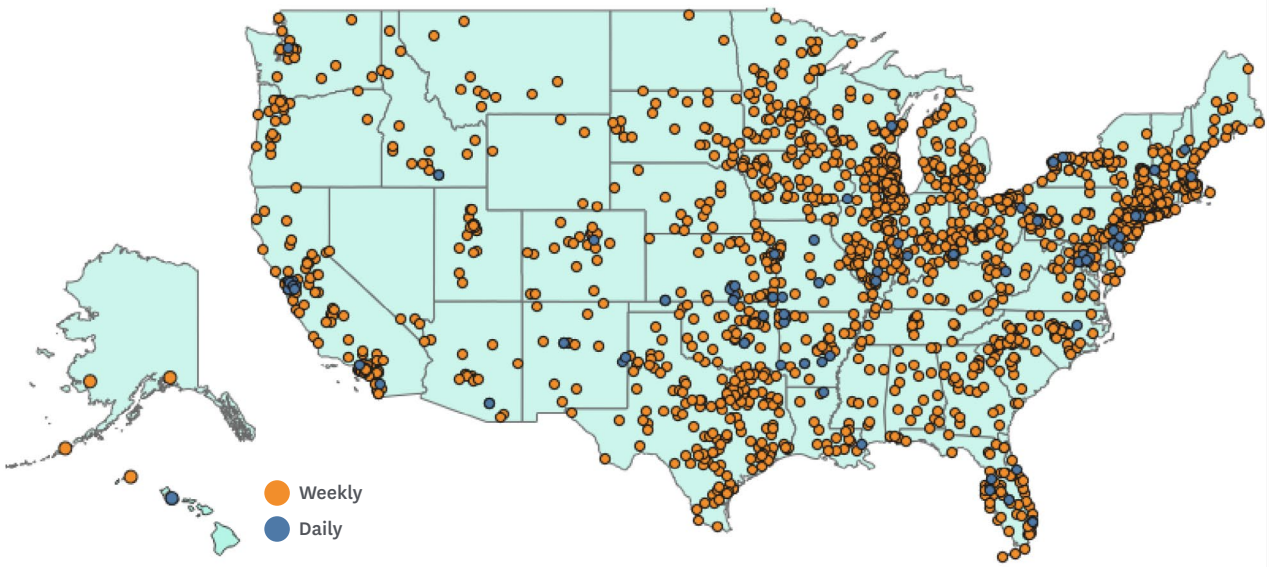
BuzzFeed
~190 people
(16% of staff)
February 2024

CNN
~100 people
July 2024

BuzzFeed News
Entire news unit shut down
(15% of staff laid off)
April 2023

As some newsrooms shrink and other outlets fold, it will be necessary to arm all journalists and other communicators with the skill set necessary to cover what is arguably the most important story of our time. Survey results from across the Center for Climate Journalism and Communication's training programs reveal that lack of confidence is a key deterrent in communicating about the issue across areas of professional expertise[14].

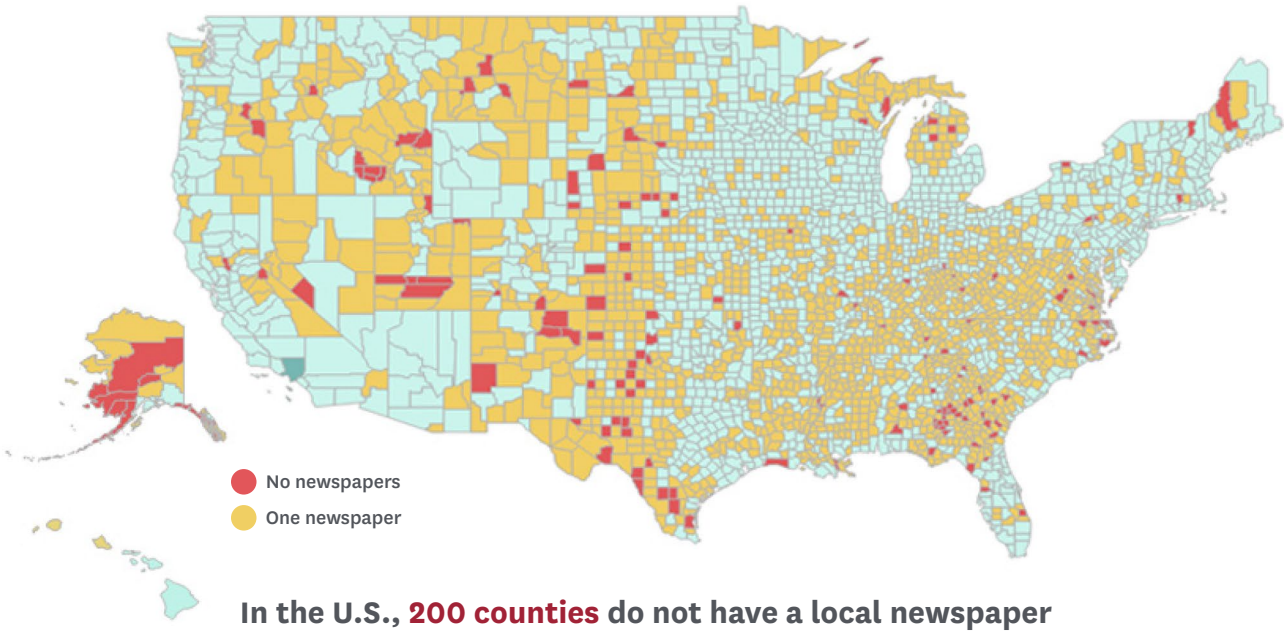
Where have newspapers disappeared?



Since 2004, the U.S. has lost more than 2,100 newspapers

Source: UNC Hussman School of Journalism and Media

Do you live in a news desert?



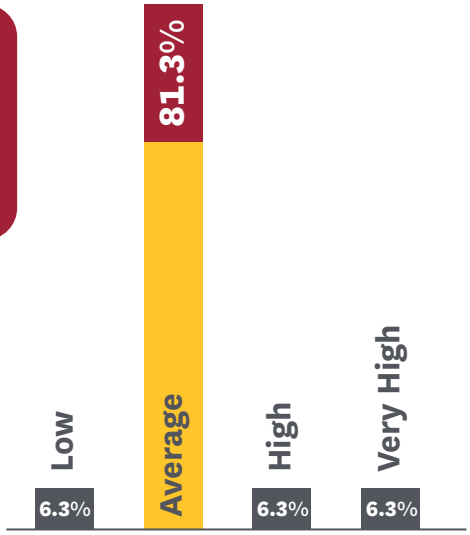
In the U.S., 200 counties do not have a local newspaper

Half of the counties in the U.S. only have one local newspaper, most of which are weekly publications. Most local news organizations do not have the resources to prioritize climate coverage in their regions.

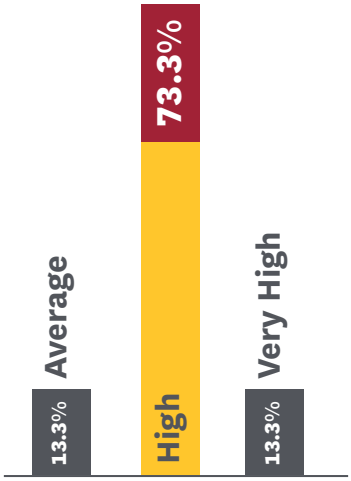
Source: UNC Hussman School of Journalism and Media

The Center for Climate Journalism and Communication surveyed 25 ABC journalists that attended one of the Center's training programs. Results from the survey show the following:

How would you describe your comfort level covering, assigning, overseeing climate news stories?

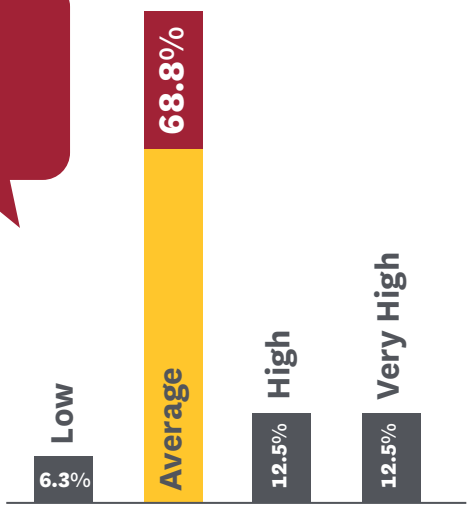


Survey conducted before training

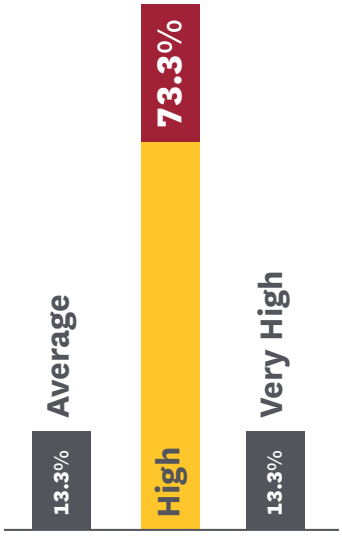


Survey conducted 6 months after training

How would you describe your level of climate literacy?



Survey conducted before training



Survey conducted 6 months after training

To meet the demand of communicators outside of journalism, entities and training programs are springing up to support marketing and communications fields including the Ethical Agency Alliance and Creatives for Climate. Additional programs at universities are also supporting the work of climate communicators including our work training students, journalists, scientists, and other experts at the Center for Climate Journalism and Communication. Organizations like Climate Central and Covering Climate Now also support journalists with training and other resources.

While climate misinformation and disinformation have been issues of concern since climate began receiving a notable volume of coverage in the 1980s, that concern has reached new levels with the widespread use of artificial intelligence, disseminated rapidly through social media. Critical conversations — in academia, in the media, and beyond — on the topics of climate misinformation and disinformation are sure to increase as the urgency for solutions grows.

Allison Agsten, Director
Center for Climate Journalism and Communication

Though trust and local news go hand in hand, results from our survey revealed that local news is not the main source of climate news for any group of professionals polled.

> I think that local journalism is incredibly important when it comes to this. Yet, there is very little that is truly local about climate in local papers. Local is the way to trust, how to change hearts and minds. Reading something in The New York Times doesn't cut it. I think we need a lot more local stories about climate — mitigation and adaptation — in local journalism, to the extent local journalism still exists.

- **Sherry Listgarten,** environmental blogger with Embarcadero Media

> I think more attention needs to be focused on people in small/local newsrooms that don't traditionally cover climate. Local TV is still a place many people get their news and so few stations talk about climate. Those that do usually rely on meteorologists — which is great, but also doesn't often connect real-world topics to the changes we're seeing. I really hope that more groups can find ways to connect with TV reporters.

- **Matthew Smith,** a local FOX News anchor in Seattle

No one person or entity can resolve these issues. Cross-sector collaboration (academia, journalism, philanthropy) will be required to bridge the existing and emergent gaps in climate reporting and communication.

> **Good luck, friends. It takes all of us.**

- **Matthew LaPlante,** journalism professor at Utah State University

Methodology

Distribution and Response Rate

The survey was distributed using Qualtrics, a leading online survey platform known for its robust data collection and analysis capabilities. This survey was sent to over 1,000 climate communicators across the world, including journalists, researchers and other professionals whose job involves some degree of climate communication. We received responses from 135 people, out of which five were international, while the rest were based in the United States.

This broad target group was strategically chosen to capture a diverse range of insights and experiences within the field. To maximize the number of respondents, we implemented a strategy of frequent follow-ups with our audience base. However, better strategies can be implemented in the future, including offering incentives upon filling the survey or spreading the word through social platforms including but not limited to media affinity groups, research conferences, etc.

Survey Duration and Timing

The survey window spanned 14 days in December so that respondents could use this time to reflect on the work they did throughout the year. This period was selected to minimize potential conflicts with major holidays or end-of-year professional commitments.

Data Collection and Analysis

The survey consisted of a series of structured questions, crafted to gather both quantitative and qualitative data. Many of the qualitative responses were categorized into bins to allow for quantitative analysis.

Limitations and Considerations

Certain limitations are inherent in this type of research. The responses represent a subset of the targeted population, and the views expressed by respondents may not fully encapsulate the entire spectrum of opinions in the field of climate communication. There are gaps in some of the data that can be better filled through more comprehensive questioning as well as higher response rates. Our average response rate for most questions was around 45%, close to the average online survey response rate of 44%, as calculated in a 2022 study of more than 1,000 online surveys in the journal, “Computers in Human Behavior Reports”[15] . Additionally, the survey's timing in December, though strategic, might have influenced the availability and responses of some participants, as many participants left one or more questions unanswered, reducing the strength in numbers we desired to see in our responses.

Appendix

(Almost) 200 Years of Climate Communications

1827 "Temperatures of the Terrestrial Sphere and Interplanetary Space" by Jean-Baptiste Joseph Fourier, published in M'emoires d l'Acad'emie Royale des Sciences de l'Institute de France VII.[16]

1856 "Circumstances affecting the heat of the sun's rays" by Eunice Foote, published by the American Journal of Science and Arts.[17]

1860 "Note on the Transmission of Radiant Heat through Gaseous Bodies" by John Tyndall, published in the Proceedings of the Royal Society of London.[18]

1896 "On the influence of carbonic acid in the air upon the temperature of the ground" by Svante Arrhenius, published in The London, Edinburgh, and Dublin Philosophical Magazine and Journal of Science.[19]

1912 The Remarkable Weather of 1911 by Francis Molena, published in Popular Mechanics.[20]

1988 The World Meteorological Organization and United Nations Environment Programme set up the Intergovernmental Panel on Climate Change (IPCC) to provide scientific information to governments.[21]

1988 Former British prime minister Margaret Thatcher talks about climate change and greenhouse gasses during a speech to The Royal Society.[22]

1988 That same year, NASA scientist James Hansen testified to the U.S. Senate that the greenhouse effect was accelerating, leading to global climate change with the potential to "drive our fellow species to extinction."[23]

1988 Following Hansen's testimony, George H. W. Bush addressed climate change during his presidential election speech in Michigan, becoming the first U.S. presidential nominee (and later, president) to speak out about the greenhouse effect.[24]

1990 The First IPCC Assessment Report is published, underlining the consequences of human-caused climate change as well as the necessity for global cooperation.[25]

1992 The United Nations established the United Nations Framework Convention on Climate Change (UNFCCC)[26] during its Earth Summit, recognizing climate change as a major international issue.

1995 The first Conference of Parties (COP) of the UNFCCC was held in Berlin, Germany.[27]

1998 The World Energy Outlook, a report first published by the International Energy Agency in 1977, becomes an annual report.[28]

2007 Yale Program on Climate Change Communication[29] and George Mason University Center for Climate Change Communication[30] are founded.

2008 Media and Climate Change Observatory is founded at the University of Oxford.

2017 First Media and Climate Change Observatory report on global climate news coverage is published.[31]

2020 Kim Stanley Robinson publishes The Ministry for the Future, a speculative fiction book set in a world where the rights of the future generations are taken just as seriously as those of the present.[32]

2021 Director Adam McKay's film "Don't Look Up" is released, unleashing reams of commentary on climate inaction across popular media.[33]

2022 Several news outlets including NPR[34] launched new climate desks.

2023 UNESCO's World Press Day, for the first time, focuses on environmental journalism.[35]

Acknowledgements

About The USC Annenberg Center for Climate Journalism and Communication

The USC Annenberg Center for Climate Journalism and Communication empowers professionals across media, public relations, strategic and corporate communications and the sciences to become effective storytellers who advance a deeper understanding of the consequences of climate change — from the global to the local and from the collective to the individual.

About USC Annenberg

The Annenberg School for Communication and Journalism at the University of Southern California is an international leader in education and scholarship in the fields of communication, journalism, public diplomacy and public relations. With an enrollment of more than 2,200 students, USC Annenberg offers graduate and undergraduate degree programs that prepare the most promising minds to inquire, innovate and lead at the global crossroads of media, technology and culture.

Authors

Allison Agsten, Director
Rhysea Agrawal, Engagement Coordinator
Michael Kittilson, Research Assistant
Natalie Lopez, Research Assistant
Grace Galante, Research Assistant

Design

Anne Marie Singer, Singer Design Studio

Administration

Pawan Ahuja, Academic Program Administrator

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