

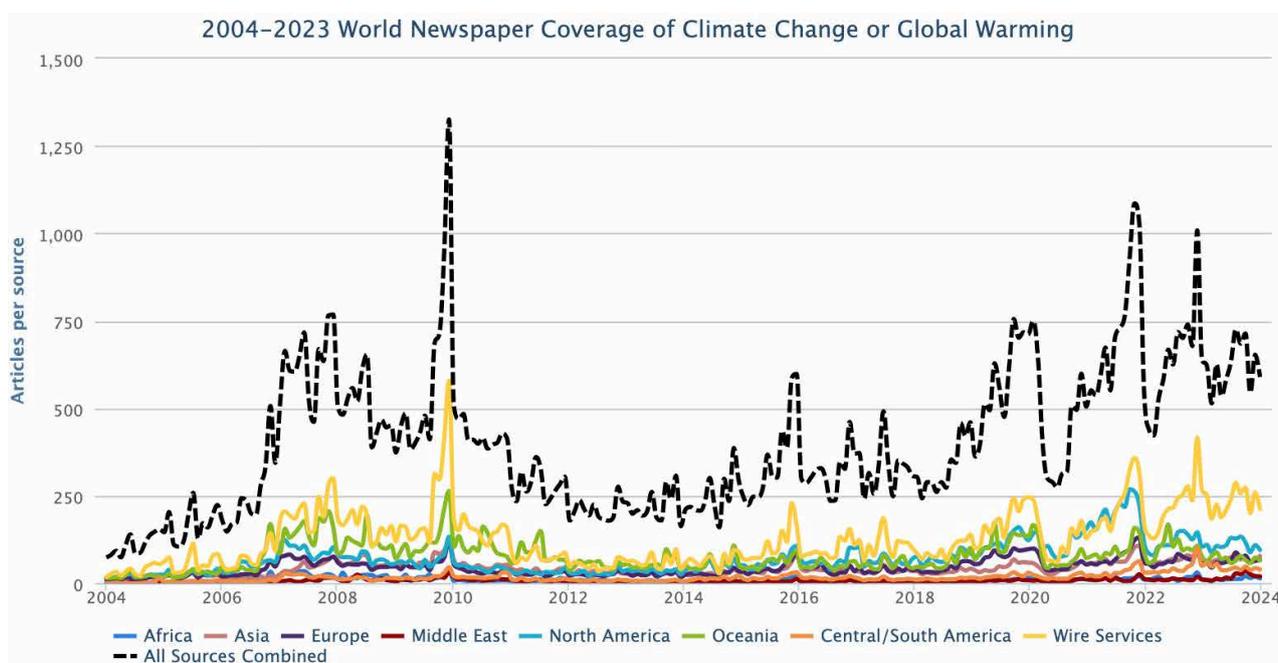
MeCCO

Media and Climate Change Observatory

# A REVIEW OF MEDIA COVERAGE OF CLIMATE CHANGE AND GLOBAL WARMING IN 2023

## SPECIAL ISSUE

MeCCO monitors 131 sources (across newspapers, radio and TV) in 59 countries in seven different regions around the world.



Media and Climate Change Observatory, University of Colorado Boulder

<http://mecco.colorado.edu>



University of Colorado  
Boulder



# MeCCO SPECIAL ISSUE 2023

## A Review of Media Coverage of Climate Change and Global Warming in 2023

**2023** has been a critical year in which climate change and global warming fought for media attention amid competing interests in other stories, events and issues around the globe. In 2023, new vocabularies have continued to pierce our consciousness: climate-related utterances like ‘global boiling’, ‘heat dome’, and ‘greenhushing’ floated in a larger pool of floaty signifiers like ‘AI’, ‘de-influencers’, ‘rizz’, and ‘Swifties’.

Global media coverage of climate change in 2023 dropped 4% from the previous year, among the sources that we at the Media and Climate Change Observatory (MeCCO) have reliably monitored since we established the project in 2007. The downturn among 2023 levels was a continuing decrease from 2021 (a 14% decrease). However, 2023 levels were higher than the amount of climate change or global warming media attention garnered in the previous 17 years, including a 33% increase from 2020 levels, and 4% higher numbers than in 2019. Reviewing our 20 years of global-level monitoring (beginning January 2004), 2021 remains the year with the highest amount of coverage of climate change or global warming overall. 2023 now ranks third in history.

These trends appear against a backdrop of the warmest year of 2023 in nearly 150 years



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of recorded history and the highest carbon dioxide concentrations in the atmosphere in the last 14 million years, how media cover climate change matters greatly. Climate-related issues, events, and developments garnered coverage through stories manifesting through intersecting *political, economic, scientific, cultural* as well as *ecological* and *meteorological* themes.

In 1948, *Washington Post* president and publisher Philip Graham was credited with saying that ‘News is a first rough-draft of history’. In this spirit, our MeCCO work can be seen as ‘a first explanation of a first rough-draft of history’ as we examine media coverage of climate change over this past calendar year.

In the pages that follow in this retrospective, our Media and Climate Change Observatory (MeCCO) team helps to explain the stories - on a month-to-month basis - that shaped overall 2023 coverage. The following month-to-month summaries are reprises of monthly summaries that our MeCCO team has compiled and posted each month

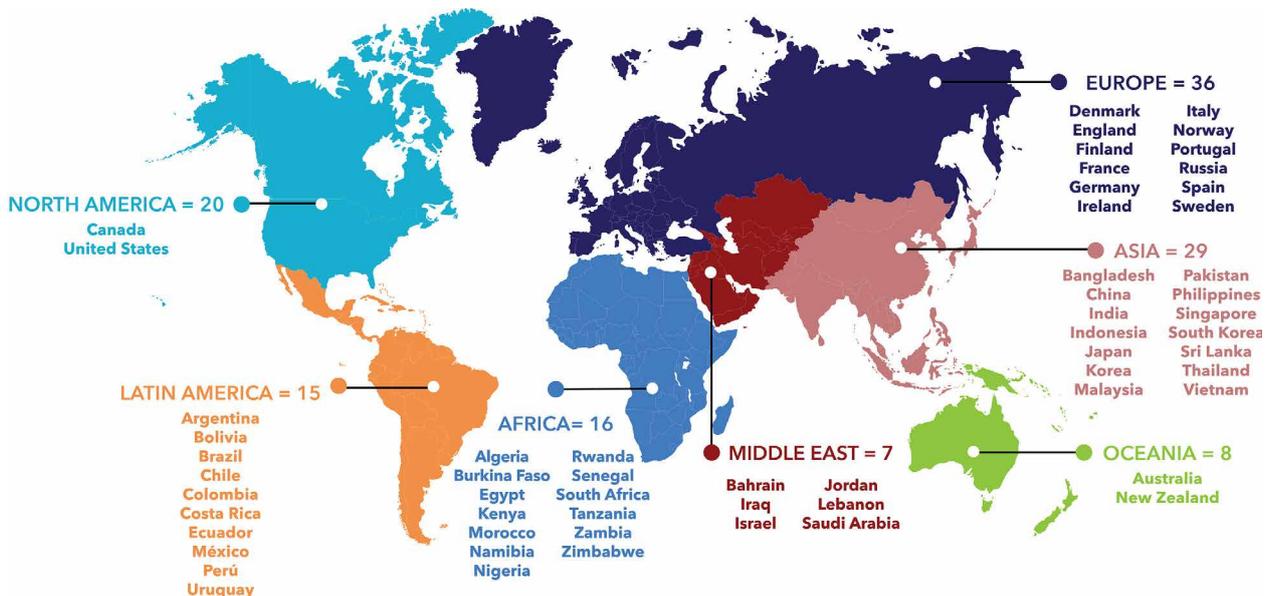


Figure 1. Map of the media sources we monitor for coverage of climate change or global warming across seven different regions around the world.

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on our website. In the whiplash world of breaking news, this retrospective can help us recall, reflect on and learn from what has emerged in news coverage of climate change over the past year, as well as what may still be emergent in 2024.

MeCCO was established at University of Oxford in 2007. Since 2009, MeCCO has been based at the University of Colorado Boulder in the Cooperative Institute for Research in Environmental Sciences (CIRES). MeCCO is a multi-university collaboration involving approximately 30 researchers across 15 institutions. It is our ambition in MeCCO to provide a solid foundation for analysis of content and quality of coverage over time and place. Members of our team have published related research in many journals, books and other outlets based on these gathered data as well.

Our monthly explainers and this annual report – the seventh year in review – therefore provide guidance on the ebbs and flows in quantity of news coverage on climate change and global warming across the globe, and across regions and several countries around the world.

We at MeCCO currently carry out monitoring work across 59 countries in 14 languages and seven different regions (Africa, Asia, Europe, Latin America, Middle East, North America and Oceania) around the world.



We at MeCCO currently carry out monitoring work across **59 countries** in **14 languages** and **seven different regions** (Africa, Asia, Europe, Latin America, Middle East, North America and Oceania) around the world.

**Arabic:** 'خانم لا ريغت' or 'يوارح لا سراتح الال'

**Danish:** 'klimaforandring' or 'global opvarmning'

**English:** 'climate change' or 'global warming'

**Finnish:** 'ilmastonmuutos' or 'ilmaston lämpeneminen'

**French:** 'changement climatique' or 'réchauffement climatique'

**German:** 'Klimawandel' or 'globale erwärmung'

**Italian:** 'cambiamenti climatici' or 'riscaldamento globale'

**Japanese:** '温暖化' or '気候変動'

**Korean:** '기후변화' or '온난화'

**Norwegian:** 'global oppvarming' or 'klimaendring'

**Portuguese:** 'mudanças climáticas' or 'aquecimento global'

**Russian:** 'изменение климата' or 'глобальное потепление'

**Spanish:** 'cambio climático' or 'calentamiento global'

**Swedish:** 'global uppvärmning' or 'klimatförändring'

Latin America, Middle East, North America and Oceania) around the world.

In partnership with the University of Colorado Libraries, each month MeCCO provides 25 updated open-source downloadable datasets (as Excel files) that accompany our 50 monthly downloadable figures (as PNG, JPEG, PDF or SVG vector images) capturing coverage across these media and at different scales.

Figure 2. Relative rankings of the volume of media coverage of climate change or global warming in seven different regions around the world, from January 2023 through December 2023 compared to previous years.

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
World	2°	4°	1°	5°	4°	3°	2°	3°	4°	6°	6°	6°	<b>3.8°</b>
Africa	4°	6°	4°	3°	3°	5°	1°	2°	1°	3°	3°	3°	<b>3.2°</b>
Asia	1°	1°	1°	2°	1°	1°	1°	2°	4°	4°	4°	3°	<b>2.1°</b>
Europe	3°	7°	3°	4°	4°	4°	1°	4°	3°	8°	7°	5°	<b>4.4°</b>
Latin America	1°	1°	1°	1°	1°	2°	1°	1°	1°	3°	3°	3°	<b>1.6°</b>
Middle East	4°	4°	1°	2°	1°	3°	1°	1°	1°	1°	2°	1°	<b>1.8°</b>
North America	4°	4°	3°	5°	4°	2°	3°	4°	5°	7°	5°	9°	<b>4.6°</b>
Oceania	8°	8°	8°	9°	9°	14°	10°	8°	12°	14°	14°	13°	<b>10.6°</b>

Some regions broke the record for the volume of articles with references to “climate change” or “global warming” in 2023 compared to the same months in previous years. For example, in Asia it broke the record from January to March and from May to July; in the Middle East it occurred in March, May, from July to October and December; and in Latin America from January to May and from July to September.

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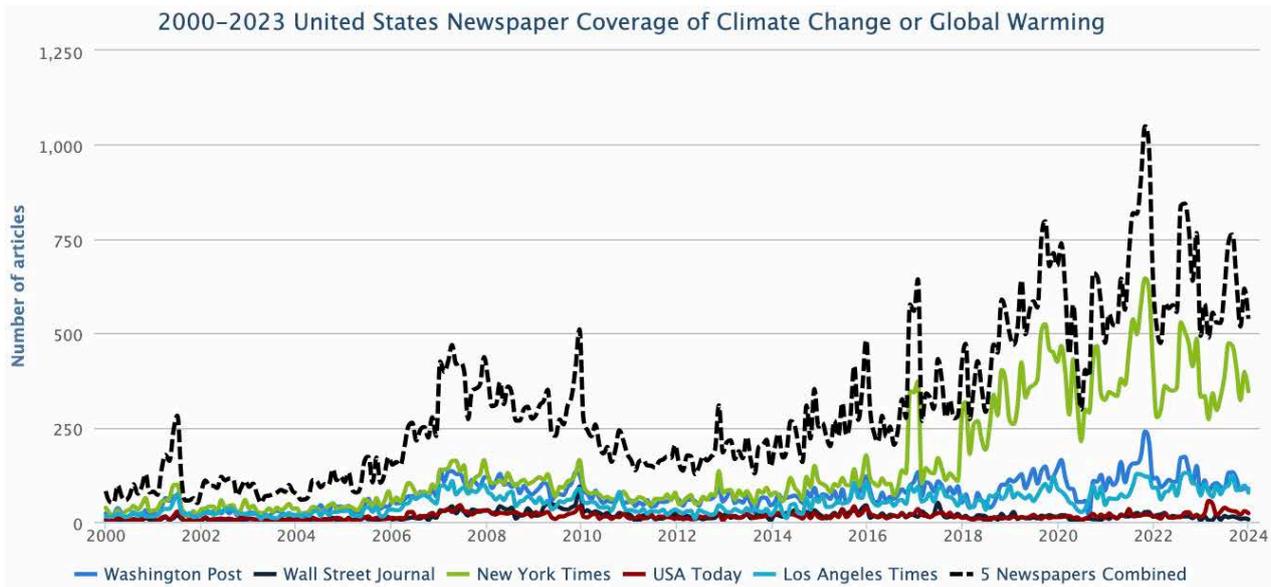


Figure 3. Newspaper media coverage of climate change or global warming in print sources in 5 US newspapers from January 2000 through December 2023.

We undertake this work because most people do not methodically track patterns in media representational practices. Moreover, everyday people typically do not dig directly into the latest peer-reviewed journal articles in academic journals. Instead, citizens turn to mass media – television, newspapers, radio, and a variety of sources online – to make sense of the world around us. As such, media function as important interpreters of information, including news about climate change and global warming.

As we collectively hurtle in 2024, the complex and multi-faceted issue of climate change cuts to the heart of humans’ relationship with the environment. Media provide powerful and important interpreters of climate science and policy, translating what can often be alienating, jargon-laden information for the broadly-construed public citizenry. Media workers and

institutions powerfully shape and negotiate meaning, influencing how citizens make sense of and value the world.

With this year-end retrospective, we welcome you to reflect on how the past year of media coverage of climate change may shape what 2024 may have in store. What follows are explanations of key events, stories, and developments through *political*, *scientific*, *cultural*, *ecological* and *meteorological* themes that have transpired during our collectively experienced year 2023.

**Report citation:** Boykoff, M., Fernández-Reyes, R., Katzung, J., Nacu-Schmidt, A. and Pearman, O. (2024). *A Review of Media Coverage of Climate Change and Global Warming in 2023*, Media and Climate Change Observatory, Cooperative Institute for Research in Environmental Sciences, University of Colorado, [http://sciencepolicy.colorado.edu/icecaps/research/media\\_coverage/summaries/special\\_issue\\_2023.html](http://sciencepolicy.colorado.edu/icecaps/research/media_coverage/summaries/special_issue_2023.html).



Thank you for your ongoing interest in the work we do through MeCCO. We remain committed to our work monitoring media coverage of these intersecting dimensions and themes associated with climate change.

**Our ongoing work is dependent on financial support  
so please consider contributing:**

<https://giving.cu.edu/fund/media-and-climate-change-observatory-mecco>

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## JANUARY “Humans continue to pump out planet-warming gases”



Beijing, China was once famous for being home to “nine million bicycles” is now notorious for its traffic jams, as people swap two wheels for four. Photo: VCG via Getty Images.



Media coverage of climate change or global warming in newspapers around the globe **dropped 1%** from December 2022 but remained **24% higher** than January 2022 levels. International wire services similarly **decreased 6%**. Radio coverage also **dipped 10%** from December 2022.

January media coverage of climate change or global warming in newspapers around the globe dropped 1% from December 2022 but remained 24% higher than January 2022 levels. International wire services similarly decreased 6%. Radio coverage also dipped 10% from December 2022. Compared to the previous month, coverage was down in Asia (-8%), the Middle East (-8%), and Oceania (-16%). Meanwhile, coverage increased in the European Union (EU) (2%), Africa (4%), North America (7%), and Latin America (18%). Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through January 2023.

At the country level, United States (US) print coverage went up 17% while television coverage

also increased 6% from the previous month. Among other countries that we at the Media and Climate Change Observatory (MeCCO) monitor, coverage dropped in Japan (-1%), the United Kingdom (UK) (-7%), Canada (-9%), Sweden (-10%), Korea (-11%), and Australia (-23%). However, coverage in January 2023 increased in India (+3%), New Zealand (+4%), Germany (+6%), Spain (+8%), Norway (+14%), Denmark (+15%), and Finland (+31%).

Turning to the content of coverage, media attention to climate change or global warming was punctuated with *ecological* and *meteorological* themes. For instance, continued extreme weather into January in North America – with links made to climate change – generated news. For example, **CNN journalist Rachel Ramirez reported**, “Parts of drought-plagued California are facing an onslaught of powerful storms to

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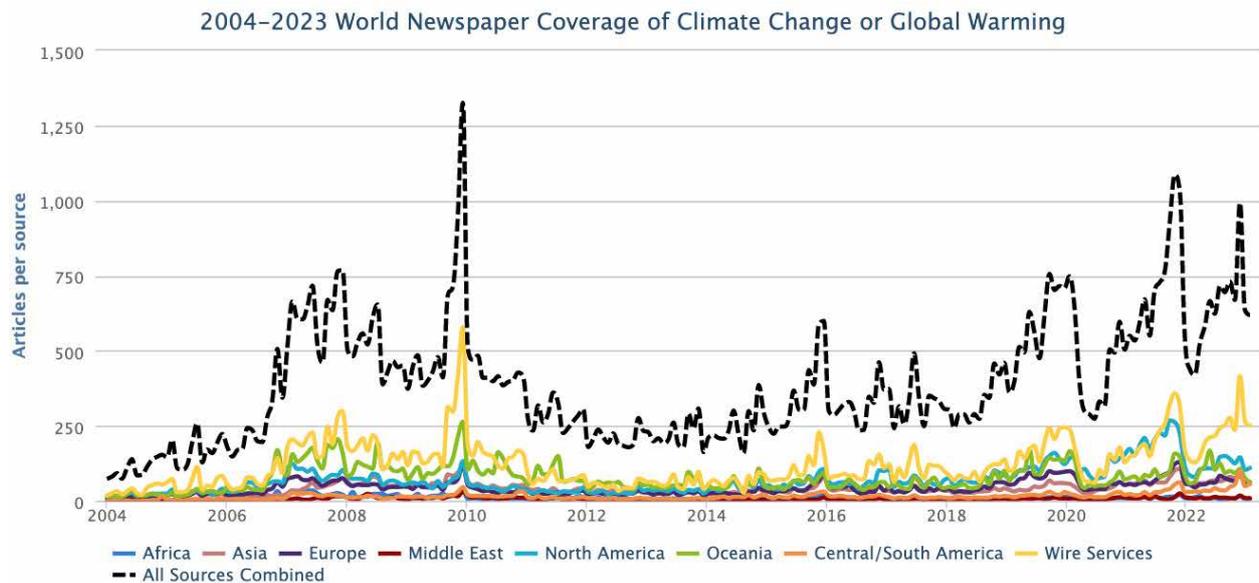


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through January 2023.

start the new year, bringing flooding rainfall and even mud and debris flows to the state. The latest in the series of storms are expected to reach the coast Wednesday morning, and while the entire state will see impacts by the end of Thursday, Northern California and the Bay Area are likely to see the worst of the weather. A so-called “bomb cyclone” over the Pacific Ocean – named because of how rapidly it intensifies over a short period of time – will sling a series of fronts at the West Coast. These fronts are being super-fueled with tropical moisture from a potent atmospheric river that stretches west to Hawaii. While the prolonged wet conditions will provide some relief to the drought conditions, the rain has proved too much too fast...This dramatic swing in periods of drought and high precipitation, or weather whiplash, can occur more often and become more intense under a rapidly warming climate. And scientists say the chances of these sudden transitions happening in California will become much higher, if humans continue to pump out planet-warming gases”.

Meanwhile, in early January a heatwave across continental Europe prompted climate change news. For example, [journalist Isabella Kwai from The New York Times reported](#), “In the coastal Spanish town of San Sebastián, residents swapped coats for T-shirts and headed to the

beach for a swim. In Rome, tourists and locals strolled in the sunshine in light sweaters. And in low-lying areas of the Pyrenees, a lack of snowfall forced some French ski resorts to close trails. The unusually warm opening days of January broke dozens of weather records across Europe. Meteorologists called the warm spell and the records it broke “staggering,” as several countries saw the hottest start to the year ever measured...while tying a single heat wave or warm spell to climate change requires analysis, it is clear that global warming is causing heat waves around the world to become hotter, more frequent and longer lasting”.

As the rains and flooding – with links to a changing climate – persisted, media stories also continued. For example, [US National Public Radio correspondents Juliana Kim and James Doubek reported](#), “Another powerful winter storm system is causing flooding, snow and mudslides in areas of California, where intense downpours have already wreaked havoc on communities earlier this month. The National Weather Service says California is in the middle of two major episodes of rain taking place “in quick succession.”” Meanwhile, [USA Today correspondents Elizabeth Weise and Dinah Voyles Pulvar reported](#), “California faces a “parade of storms” over the next several weeks,

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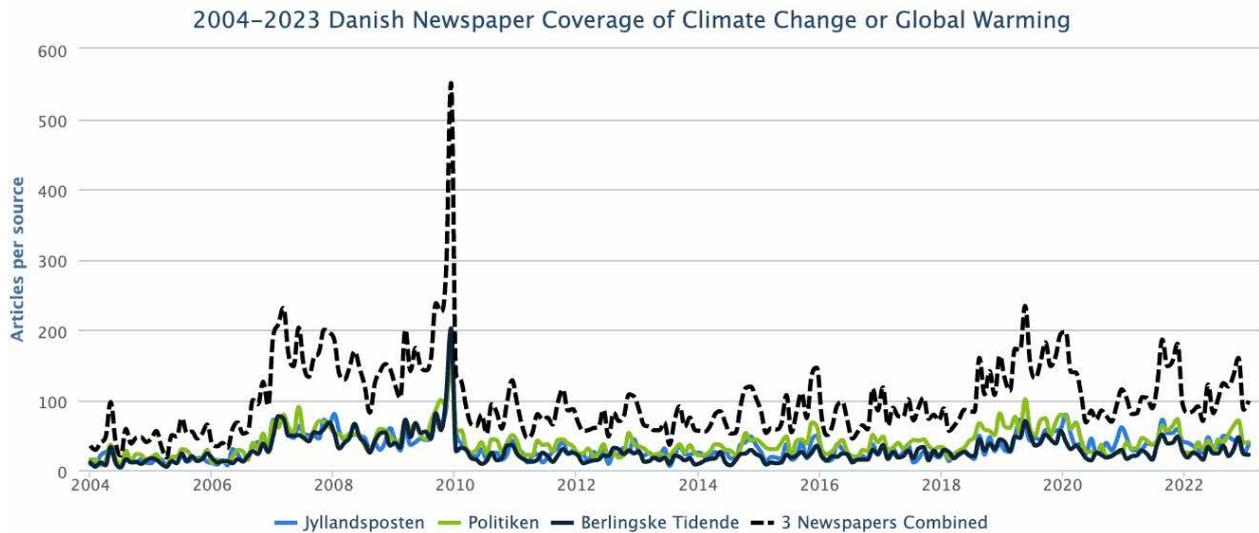


Figure 2. Newspaper coverage of climate change (“klimaforandringer”) or global warming (“global opvarmning” and “[den] globale opvarmning”) in the Danish newspapers Jyllandsposten, Politiken, and Berlingske Tidende from January 2004 through January 2023.

on top of deluges that have killed at least 14 people, caused flooding, knocked out power and forced evacuations and school closures up and down the coast. Given the Mediterranean climate of the state’s coastal areas, wet winters and dry summers are a natural part of California’s weather patterns going back millennia”.

Furthermore, winter in Europe started with record-high temperatures. Meteorologists link it to climate change. *El Mundo* journalist **Carlos Fresneda** noted, “The already known ‘winter heat wave’, which has brought unusually high temperatures for these dates since the New Year, has already struck down hundreds of records in Europe and may be a foretaste of what lies ahead for us expect in 2023. 2022 was the hottest year in the UK, France and Spain, confirming Europe’s trend as ‘ground zero’ for climate change. Globally, it was the fourth hottest year, largely due to the cooling effect of the Pacific due to the phenomenon known as ‘La Niña’, which after three years will hand over to ‘El Niño’ in 2023”. As a consequence of this heat, alpine ski slopes were closed. *La Vanguardia* journalist **Antonio Cerrillo** wrote, “The unprecedentedly warm temperatures registered at the beginning of the year in Europe have forced the closure of many ski slopes and the conversion of these stations into nature viewpoints or simple paths for excursions and contemplation, when they are not they have had

to close completely. Grass and mud replace seasonal snow from Chamonix in France to Innsbruck in Austria. The Alps seem like a stage designed for first-hand viewing of the effects of climate change, which is melting glaciers and exposing the remains of ancient aircraft and the bodies of long-lost mountaineers”.

Last, assessments of extreme weather disasters in 2022 – with links drawn to climate change – populated several news stories at the start of the 2023 calendar year. For example, *Associated Press* journalist **Seth Borenstein** reported, “Costly weather disasters kept raining down on America last year, pounding the nation with 18 climate extremes that caused at least \$1 billion in damage each, totaling more than \$165 billion, federal climate scientists calculated Tuesday. Even though 2022 wasn’t near record hot for the United States, it was the third-wildest year nationally both in number of extremes that cost \$1 billion and overall damage from those weather catastrophes, the National Oceanic and Atmospheric Administration said in a report issued at the American Meteorological Society’s conference. The amount, cost and death toll of billion-dollar weather disasters make up a key measurement, adjusted for inflation, that NOAA uses to see how bad human-caused climate change is getting. They led to at least 474 deaths”.

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In January, various **cultural** stories relating to climate change or global warming were evident in wider news coverage. To illustrate, news of Google sales to clients that spread climate disinformation broke in January. For example, **Guardian journalist Geoff Dembicki reported**, “media outlet founded by conservative influencer Ben Shapiro paid Google to advertise on

search pages questioning whether the climate crisis is real, according to new research from a disinformation watchdog group. The Daily Wire bought ads on search terms over the past year such as “climate change is a hoax” and “why is climate change fake”, meaning that when people Googled these phrases, stories from Shapiro’s outlet were some of the first results that appeared,



Figure 3. Newspaper front pages stories in January with links to climate change and climate risks

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the research found. Google sold these ads even after announcing a new policy in October 2021 prohibiting ads that promote climate crisis denial. Its CEO, Sundar Pichai, publicly stated at the time that “when people come to Google Search with questions about climate change, we’ll show authoritative information from sources like the United Nations”.

January 2023 media coverage of climate change in this cultural sphere also featured the greenhouse gas emissions and potential health dangers associated with gas stoves. For example, [New York Times correspondent Hiroko Tabuchi wrote](#), “Whether many Americans will continue to cook and warm their homes with gas, or instead switch to electricity, has become one of the most divisive issues in public health, as well as the fight over climate action. A growing body of scientific research has documented indoor air pollution and health problems caused by gas stoves, which emit nitrogen dioxide, carbon monoxide and fine particulate matter when they are turned on. A December study estimated that gas-burning stoves were associated with 13 percent of childhood asthma in the United States. Gas stoves also emit methane, even when the stoves are off. Methane is a powerful greenhouse gas and significant contributor to global warming. Almost 100 cities and counties have adopted electrification ordinances that ban or discourage gas hookups for new buildings in favor of electric appliances and heat pumps”.

Many [scientific](#) themes continued to emerge in media stories during the month of January through new studies, reports, and assessments. For instance, new [research in Science](#) about emissions reductions and reductions of glacial melt generated several news accounts. For example, [Washington Post journalist Chris Mooney reported](#), “A sweeping study of all the world’s glaciers outside of the Greenland and Antarctic ice sheets has found that nearly half of them will melt by century’s end, even if the world meets its most ambitious global warming goal. The study, published Thursday in the journal *Science*, finds that even with just 1.5 degrees Celsius (2.7 degrees Fahrenheit) of warming

“A sweeping study of all the world’s glaciers outside of the Greenland and Antarctic ice sheets has found that nearly half of them will melt by century’s end, even if the world meets its most ambitious global warming goal.”



The Nigardsbreen glacier in Jostedal, Norway has lost almost 1.8 miles of length in the past century. Photo: Bram Janssen/AP.

above preindustrial levels, some 104,000 of the world’s more than 215,000 mountain glaciers and ice caps will melt, raising global sea levels by a little shy of 4 inches. A rise of 1.5 degrees Celsius beyond preindustrial temperatures is now extraordinarily difficult to avoid, suggesting that a change of this magnitude may be nearly unstoppable. With every additional increment of temperature increase, the study finds, the outlook becomes worse. Three degrees C (5.4 degrees F) of warming, the research finds, would translate into a loss of over 70 percent of global glaciers and result in about 5 inches of global sea-level rise. So, even if many losses are baked in, the authors say, it is still worth trying to avoid whatever warming we can”.

Meanwhile, a [Rhodium Group report](#) about 2022 US greenhouse gas emissions in early January also generated news. For example, [New York Times reported Elena Shao wrote](#), “America’s greenhouse gas emissions from energy and industry rose last year, moving the

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nation in the opposite direction from its climate goals...Emissions ticked up 1.3 percent even as renewable energy surpassed coal power nationwide for the first time in over six decades, with wind, solar and hydropower generating 22 percent of the country's electricity compared with 20 percent from coal. Growth in natural gas power generation also compensated for coal's decline".

In January, another [Science research article](#) by Geoffrey Supran, Stefan Rahmstorf, and Naomi Oreskes also garnered significant media attention. For example, [Guardian journalist Oliver Milman wrote](#), "The oil giant Exxon privately "predicted global warming correctly and skilfully" only to then spend decades publicly rubbish such science in order to protect its core business, new research has found. A trove of internal documents and research papers has previously established that Exxon knew of the dangers of global heating from at least the 1970s, with other oil industry bodies knowing of the risk even earlier, from around the 1950s. They forcefully and successfully mobilized against the science to stymie any action to reduce fossil fuel use. A new study, however, has made clear that Exxon's scientists were uncannily accurate in their projections from the 1970s onwards, predicting an upward curve of global temperatures and carbon dioxide emissions that is close to matching what actually occurred as the world heated up at a pace not seen in millions of years. Exxon scientists predicted there would be global heating of about 0.2C a decade due to the emissions of planet-heating gases from the burning of oil, coal and other fossil fuels. The new analysis, published in Science, finds that Exxon's science was highly adept and the "projections were also consistent with, and at least as skillful as, those of independent academic and government models". Exxon knew of climate change in 1981, email says - but it funded deniers for 27 more years. Geoffrey Supran, whose previous research of historical industry documents helped shed light on what Exxon and other oil firms knew, said it was "breathtaking" to see Exxon's projections line up so closely with what subsequently happened".

[Research from the UK Met Office](#) also generated several news stories in January. For example, [Guardian environment editor Damian Carrington reported](#), "The record-breaking heat in the UK in 2022 was made 160 times more likely by the climate crisis, indicating the dominant influence of human-caused global heating on Britain. Last year has been confirmed as the UK's hottest on record, with the average annual temperature passing the 10C mark for the first time. Scientists at the Met Office calculated that such heat is now expected every three to four years. Without the greenhouse gases emitted by humanity, such a warm year would be expected only once every five centuries. The 10.03C recorded in 2022 beat the previous record of 9.88C set in 2014, and is 0.89C above the average of the last three decades. All the UK nations set new record annual temperatures. The world's longest instrumental record of temperature is the 364-year-long Central England Temperature and this also set a new high in 2022 of 11.1C. Scientists were shocked in July when the daily temperature record passed 40C for the first time, obliterating the previous high of 38.7C. The hot summer led to thousands of early deaths. A cold spell in December made little difference to the overall average annual temperature. The scientists estimated the influence of global heating on the UK's record hot year by comparing the results of climate models reflecting today's high levels of carbon dioxide with models representing the pre-industrial period, when CO2 levels were much lower".

Many [political](#) and [economic](#)-themed media stories about climate change or global warming continued to roll out in the month of January. At the start of the month, the naming of Sultan al-Jaber - CEO of the United Arab Emirates' state-run oil company - as president of the next United Nations climate negotiations later this year (COP28) gave rise to several media stories. For example, [BBC correspondent Matt McGrath reported](#), "The head of one of the world's biggest oil companies has been named to lead the COP28 global climate talks in Dubai, later this year. Sultan Ahmed Al Jaber is currently the

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chief executive officer of the Abu Dhabi National Oil Company. He is also the minister for industry and advanced technology for the COP28 hosts, the United Arab Emirates. Campaigners say he must stand down from his oil business role while president as it is a clear conflict of interest. They believe someone steeped in the oil industry may not push countries to rapidly reduce their production and use of fossil fuel, which scientists say is critical to avoiding dangerous climate change”.

Furthermore, oil and gas company profiteering – with associated climate change impacts – made news in January. For example, *Associated Press* reporter **Cathy Bussewitz** noted, “Exxon Mobil posted record annual profits in 2022 as consumers globally struggled with high prices for gasoline, home heating and consumer goods. The energy giant brought in \$55.7 billion in annual profits, exceeding its previous record of \$45.22 billion in 2008, when a barrel of oil soared close to \$150. Exxon’s bounty came as Americans shelled out \$4 per gallon for gasoline throughout most of the spring and summer with millions hitting the road. At one point gasoline topped \$5 a gallon. Supplies grew tight and prices rose globally after Russia invaded Ukraine and reduced energy supplies to Europe. The year marked a dramatic turnaround from 2020 when travel ground to a halt during the coronavirus pandemic and demand for fuel evaporated. That year, the price for future oil contracts plummeted below zero at one point, dozens of oil and gas companies filed for bankruptcy protection and thousands of industry workers lost their jobs. Exxon, for the first time in decades, lost money in 2020. Two years later, Exxon booked \$12.75 billion in profits and \$95.43 billion in revenue in just its final quarter”. Meanwhile, *US National Public Radio* correspondent **Camila Domonoske** added, “ExxonMobil earned nearly \$56 billion in profit in 2022, setting an annual record not just for itself but for any U.S. or European oil

giant. Buoyed by high oil prices, rival Chevron also clocked \$35 billion in profits for the year, despite a disappointing fourth quarter. Energy companies have been reporting blockbuster profits since last year, after Russia’s invasion of Ukraine sent oil prices sharply higher... The high profits have also revived perennial conversations about how much profit is too much profit for an oil company – especially as urgency over the need to slow climate change is mounting around the world. Exxon’s blockbuster earnings, announced Monday, will likely lead to more political pressure from the White House. Last year President Biden called out Exxon for making “more money than God.” The White House and Democrats accuse oil companies of hoarding their profits to enrich shareholders, including executives and employees, instead of investing the money in more production to ease prices at the gas pump. Last year, between dividends and share buybacks, Exxon returned \$30 billion to shareholders, while Chevron paid out more than \$22 billion. Exxon plans to hold production flat in 2023, while Chevron plans to increase production by 0 to 3%”.

Last, climate change made news at the Davos Forum in January. For example, *Expansión* journalist **Víctor Cruzado** wrote, “After several years of listening to the song without paying enough attention, the wolf finally seems to have arrived. The lack of measures to mitigate and adapt development to climate change and its effects, from natural disasters to increased social instability, is already configured as the main global risk for the next decade, according to the World Economic Forum. The consequences of climate change are ahead of weapons of mass destruction, water crises, large-scale involuntary migration and sudden swings in energy prices, the number one major concern for doing business in 93 economies and the most widespread risk. Variations in weather harm economic development, multiplying geopolitical instability”.

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**FEBRUARY** “Scientists have pointed to climate change as they register more extreme weather events worldwide”



The Chilean government extended an emergency order and called for international help as deadly forest fires continued to tear through the country. Photo: Toa55/Shutterstock.



Media coverage of climate change or global warming in newspapers around the globe **decreased 15%** from January 2023 but remained **14% higher** than February 2022 levels. International wire services **dipped 27%** while radio coverage similarly **dropped 26%** from January 2023.

February media coverage of climate change or global warming in newspapers around the globe decreased 15% from January 2023 but remained 14% higher than February 2022 levels. International wire services dipped 27% while radio coverage similarly dropped 26% from January 2023. Compared to the previous month, coverage was down in Asia (-5%), Africa (-17%), Latin America (-19%), the European Union (EU) (-22%), North America (-22%), and the Middle East (-30%). Meanwhile, coverage increased in Oceania (+22%). Figure 1 shows trends in newspaper media coverage at the global scale - organized into seven geographical regions around the world - from January 2004 through February 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage dropped 16%

while television coverage decreased 30% from January.

Turning to the content of coverage, media attention to climate change or global warming was punctuated with *ecological* and *meteorological* themes. For instance, several disaster events across South America generated news coverage. For example, *Washington Post* journalists *Ellen Francis and Naomi Schnanen reported*, “Hundreds of wildfires scorching southern and central Chile have left at least 23 people dead and hundreds more injured and displaced from their homes. The latest death toll came from the country’s Senapred disaster response agency, which added that emergency alerts were sent to another region as firefighters combat the flames...Scientists have pointed to climate change as they register more extreme weather events worldwide”. As a second example, *EI*

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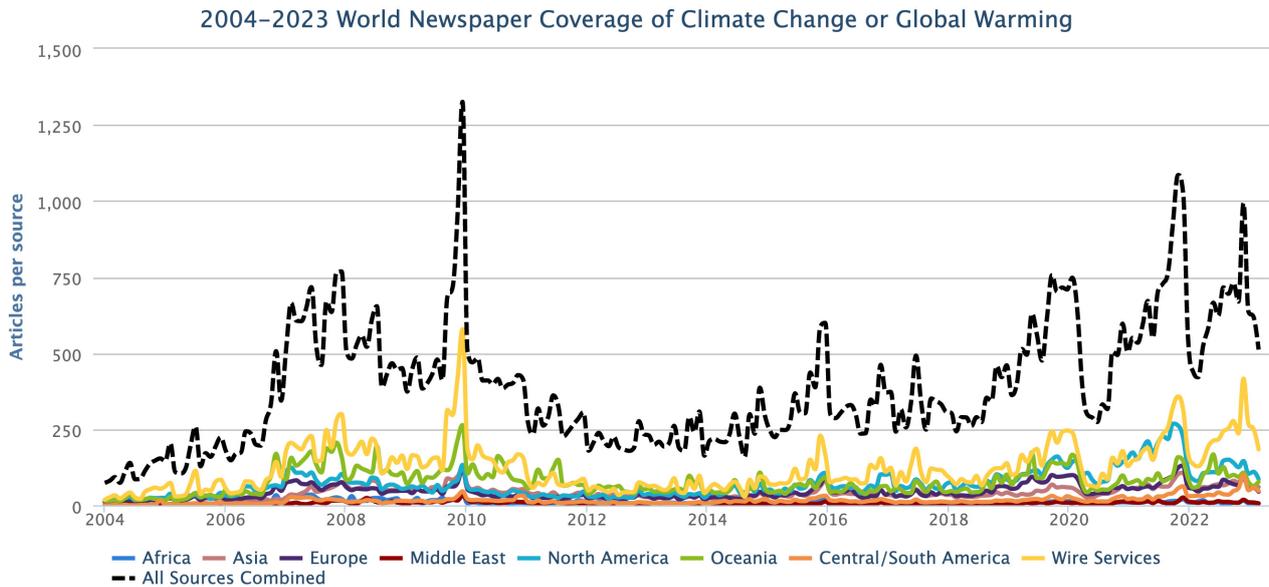


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through February 2023.

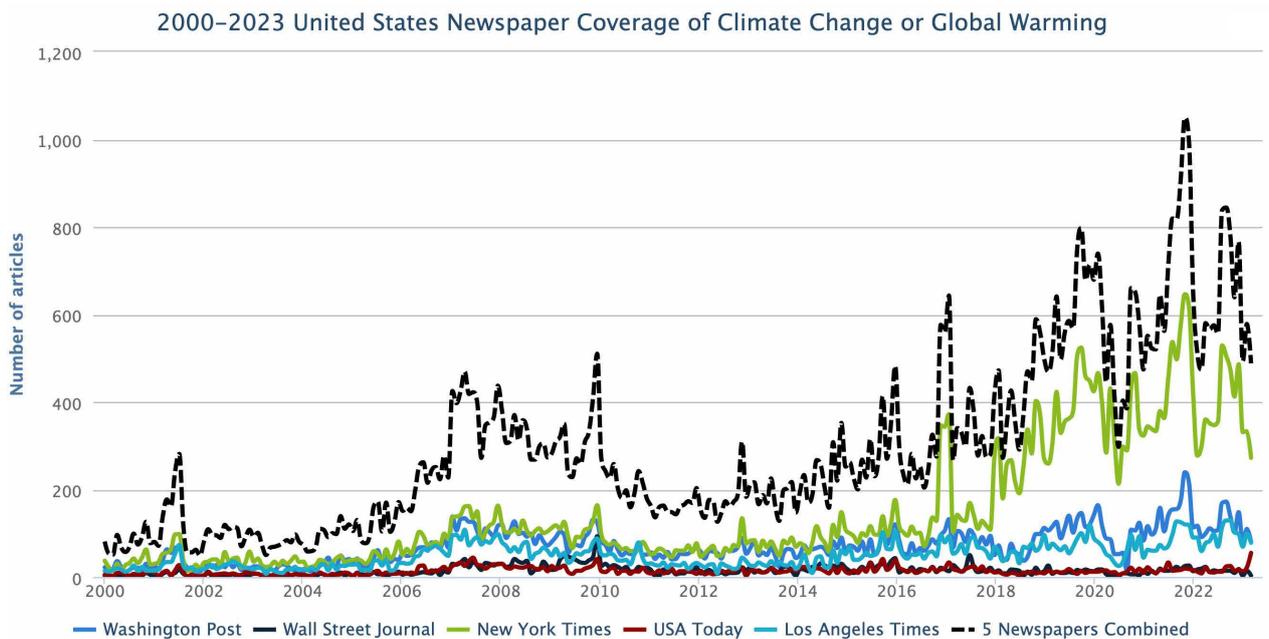


Figure 2. Newspaper coverage of climate change or global warming in US newspapers *Washington Post*, *Wall Street Journal*, *New York Times*, *USA Today*, and *Los Angeles Times* from January 2004 through February 2023.

**Mundo journalist Sebastián Fest wrote**, “Summer is closing in the Southern Cone amid climatic tragedies in the Pacific and the Atlantic. If in Chile fire is the destructive element, in Brazil it is water, in both cases with virulence and intensities rarely seen. A single week in February, the first, was enough for Chile to burn a number of hectares equivalent to those lost in two years of fires. And in Brazil, the coast of the State of Sao Paulo and part of that of Santa Catarina saw more rain fall in

one day than ever before: 683 millimeters in 15 hours in municipalities such as Sao Sebastiao or Bertioga (...) In Chile, 24 people died, in Brazil, 64 and there are 40 missing. And the numbers could continue to grow. The tragedy was conceived in the south, with the advance of a cold front of unprecedented power that led Buenos Aires to experience the highest temperatures in the last half century in February (38.1) and, just five days later, the lowest in 62 years, with 6.9 degrees”.

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Also in February, the arrival of Cyclone Gabrielle in New Zealand after previous flooding linked to climate change earned media attention. For example, [Washington Post](#) journalists [Rachel Pannett](#) and [Dan Stillman](#) reported, “New Zealand’s government declared a rare state of emergency as a cyclone lashed the country, causing destructive floods and landslips for the second time in a matter of weeks, underscoring the challenges in adapting to more frequent severe weather crises...The back-to-back storms have sparked a national reckoning about New Zealand’s resilience to future threats, as climate change fuels more extreme weather systems such as these. During the January storm, new all-time daily rainfall records in Auckland were reported by the country’s National Institute of Water and Atmospheric Research (NIWA). Auckland Airport was closed because of floodwater inside the terminal. The airport observing station recorded five inches of rain within two hours”.

Meanwhile, in the Mediterranean, corals were ‘scorched’ by the summer heat waves, given that “high temperatures occur with increasing frequency and destroy ecosystems” [according to La Vanguardia](#) journalist [Joaquim Elchaco](#). Furthermore, the canals of Venice remained empty as [El País](#) journalist [Daniel Verdú](#) wrote, “The unusual drop in the water level in the Venetian canals, caused by various atmospheric phenomena, adds to a severe drought in northern Italy”.

Ecological and meteorological media stories with links to climate change pervaded the African continent in February as well. For example, [El País](#) journalist [Pablo Guimón](#) noted, “Extreme weather and war starve Somalia. In the displacement camps of Dolow,

“Extreme weather and war starve Somalia. In the displacement camps of Dolow, thousands of families are fleeing a deadly combination of Islamist extremism and the worst drought the Horn of Africa has seen in 40 years.”

“The UN estimates that, by this summer, there will be 1.8 million children under five years of age with severe malnutrition. Experts are clear that the situation is a consequence of climate change.”



A woman and a child fill their containers with water at one of the taps installed by humanitarian organizations in the displacement camp in Dolow, Somalia. Photo: Álvaro García.

thousands of families are fleeing a deadly combination of Islamist extremism and the worst drought the Horn of Africa has seen in 40 years. Somalia has two rainy seasons a year, and in a society dominated by a subsistence agricultural economy, thousands of households are pushed to the brink if water does not arrive. It happens that the last five rainy seasons have failed. And no one expects much from the next one either. At least 3.8 million Somalis have fled their homes, many huddled in displacement camps like the five that have sprung up around Dolow. The UN estimates that, by this summer, there will be 1.8 million children under five years of age with severe malnutrition. Experts are clear that the situation is a consequence of climate change. Science shows that droughts and other extreme events, such as torrential rains, are now more frequent. The cycle of



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the globe. Now, Republicans around the country say Wall Street has taken a sharp left turn, attacking what they term “woke capitalism” and dragging businesses, their onetime allies, into the culture wars...Senator Sheldon Whitehouse, Democrat of Rhode Island, said he believed the Republican position on E.S.G. was more about ginning up outrage than about just how much of a financial risk climate change posed to long term investments. “They invent culture-war provocations that drive clicks, and woke capitalism is part of that,” he said”.

Many *scientific* themes continued to emerge in media stories during the month of January through new studies, reports, and assessments. For instance, research finding record levels of sea ice loss near Antarctica gained media attention. For example, *Associated Press* journalist **Seth Borenstein reported** on a study in *Nature* writing, “Scientists got their first up-close look at what’s eating away part of Antarctica’s Thwaites ice shelf, nicknamed the Doomsday Glacier because of its massive melt and sea rise potential, and it’s both good and bad news. Using a 13-foot pencil-shaped robot that swam under the grounding line where ice first juts over the sea, scientists saw a shimmering critical point in Thwaites’ chaotic breakup, “where it’s melting so quickly there, there’s just material streaming out of the glacier,” said robot creator and polar scientist Britney Schmidt of Cornell University. Before, scientists had no observations from this critical but hard-to-reach point on Thwaites. But with the robot named Icefin lowered down a slender 1,925-foot (587-meter) hole, they saw how important crevasses are in the fracturing of the ice, which takes the heaviest toll on the glacier, even more than melting”.

Finally, *political* and *economic*-themed media stories about climate change or global warming continued to roll out in the month of January.

“Scientists got their first up-close look at what’s eating away part of Antarctica’s Thwaites ice shelf, nicknamed the Doomsday Glacier because of its massive melt and sea rise potential.”

“Using a 13-foot pencil-shaped robot that swam under the grounding line where ice first juts over the sea, scientists saw a shimmering critical point in Thwaites’ chaotic breakup, where it’s melting so quickly there, there’s just material streaming out of the glacier.”



The pencil-shaped robot is giving scientists their first look at the forces eating away at the Thwaites glacier. Photo: Schmidt/Lawrence/Icefin/NASA PSTAR RISE UP via AP.

For example, several news stories covered the development that the European Union took steps towards the decarbonization of its land transport in February. *El País* journalist **Silvia Ayuso noted**, “The European Parliament has given its final approval to the ban, since 2035, on the sale in European territory of new combustion cars and vans, including gasoline, diesel and hybrid ones...From Brussels, the European Commission launched a proposal that seeks to go further: accelerate the green transition also among heavy vehicles -trucks and buses- for which it has proposed new, more “ambitious” goals to reduce CO2 emissions. It is not a trivial issue: trucks, urban and long-distance buses are, Brussels stresses, responsible for more than 6% of the total greenhouse gas emissions in the EU and 25% of those from road transport”.

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## MARCH “Humanity is on thin ice – and that ice is melting fast”



Pakistani women wade through floodwaters as they take refuge in Shikarpur district of Sindh Province, of Pakistan. Photo: Fareed Khan/AP.



Media attention around the globe **increased 19%** from February 2022. However, coverage **decreased 7%** from a year before. Meanwhile, global radio coverage dipped again from the previous month, this time it was **down 2%**. Coverage in international wire services **increased 14%** from February 2022.

**M**arch media coverage of climate change or global warming in newspapers around the globe increased 21% from February 2023 and was also 14% higher than March 2022 levels. International wire services increased 22% while radio coverage similarly went up 26% from February 2023. Compared to the previous month, coverage increased in Asia (12%), Oceania (15%), Latin America (17%), North America (24%), the European Union (EU) (33%), Africa (34%), and the Middle East (106%). Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through March 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage increased

14% while television coverage increased 57% from February.

Turning to the content of coverage, media attention to climate change or global warming was pervaded by *ecological* and *meteorological* themes. For instance, heavy rains and flooding in the US west – with links made to climate change – generated substantial media coverage. For example, **CNN journalist Rachel Ramirez reported**, “California is bracing for yet another powerful, atmospheric river storm this week, continuing the onslaught of major weather whiplash after a year’s long, historic megadrought. Many welcomed this winter’s heavy rain and snow since it was so desperately needed to replenish the state’s severely drained reservoirs and depleted groundwater. But the storms kept coming. California is now facing its 12th significant atmospheric river since the parade

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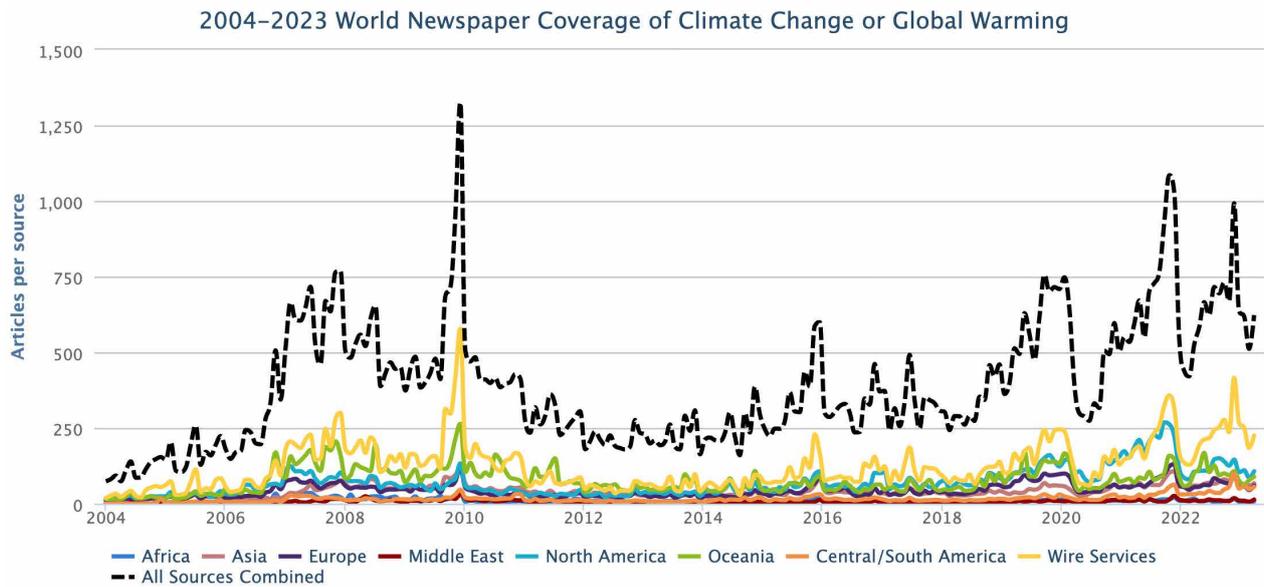


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through March 2023.

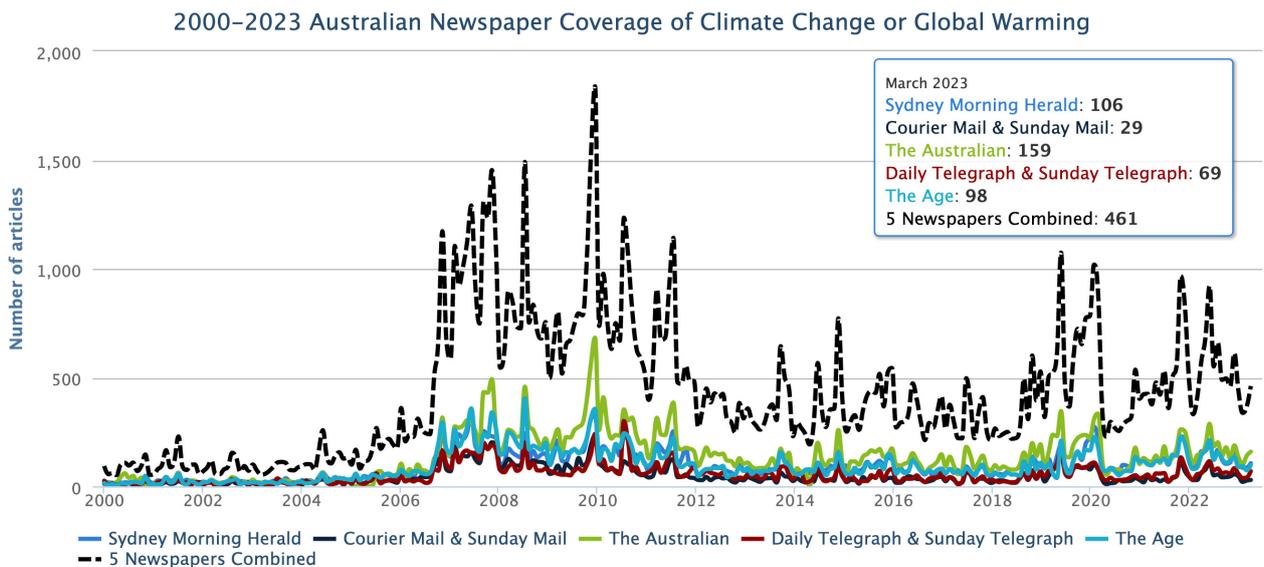


Figure 2. Newspaper coverage of climate change or global warming in Australian newspapers *Sydney Morning Herald*, *Courier Mail & Sunday Mail*, *The Australian*, *Daily Telegraph & Sunday Telegraph*, and *The Age* from January 2000 through March 2023.

of strong storms began in late December... It's unclear how the climate crisis could be playing a role in the number of storms that hit the West Coast. But climate scientists have linked the climate crisis to an increase in the amount of moisture the atmosphere holds, meaning storms – such as hurricanes and atmospheric rivers that are impacting the West Coast now – will be able to bring more moisture inland than it would without climate change, which in turn leads to an increase in rainfall rates and flash flooding”.

Moreover, *political* and *economic*-themed media stories about climate change or global warming continued to unfold in March. Among these stories, actions by the country of Vanuatu grabbed media headlines and stories. For example, *Washington Post* correspondent **Michael Birnbaum** wrote, “The small Pacific island nation of Vanuatu won a major victory to advance international climate law Wednesday after it persuaded the U.N. General Assembly to ask the world’s highest international court to rule on

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the obligations of countries to address climate change. The request for an advisory ruling from the International Court of Justice is expected to clarify the legal obligations of countries to address climate change – and to create a path for them to be sued if they fail to do so. The U.N. effort was a significant outcome for Vanuatu, an archipelago nation of 320,000 people that is suffering from climate-change-driven natural disasters. In recent weeks, it was hit by two Category 4 cyclones, the severity of which its leaders blamed on global warming. Thousands of people are still living in shelters. The country has used its moral authority and ability to stage action at the United Nations to achieve outsize results on climate issues. The U.N. General Assembly approved the measure by acclamation, with neither the United States nor China standing in the way of the effort despite uncertainty in advance whether they would seek a formal up-or-down vote”.

In March, the European Union took several political actions that garnered media attention. For example, *El País* journalist **Silvia Ayuso** wrote, “According to data from the European Commission, more than half of the ecological claims made by companies and products, from clothes to detergents to food, are “vague, misleading or unsubstantiated”. Up to 40% even lack a basis to be sold as environmentally friendly products.” On the other hand, he deepened the initiative of the “right of reparation”. “Every year, in the EU alone, 35 million tons of devices that could be repaired are thrown away. Something that creates unnecessary greenhouse gases, up to 261 million tons per year. And it does not only affect the environment: Brussels calculates that consumers lose up to 12,000 million euros every year buying new household appliances instead of repairing broken ones”.

Also in March, news circulated when a gathering of foreign ministers, heads of state

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Almost two-thirds of global e-waste was made up of discarded kitchen and laundry devices. Photo: Phil Noble/AP.

and government of the 22 countries of the Ibero-American Community of Nations held the XXVIII meeting in the Dominican Republic. For example, *El País* journalists **Francesco Manetto** y **Miguel González** noted that “the summit was convened under the slogan “Together for a just and sustainable Ibero-America”. The meeting addressed “four agreements on climate change, food security, digital divide and a proposal on credits and international financial architecture”. It is the first time that it prioritizes environmental challenges. The Ibero-American Environmental Charter is an important document of common commitment of the countries to address the challenges of climate change, the loss of biodiversity, pollution, deforestation, desertification, the loss of glaciers, drought, the degradation of soils, the scarcity of water resources and the pollution of the oceans, as well as the increased risk of disasters”.

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Figure 3. Newspaper front page stories in March covering the release of the United Nations Intergovernmental Panel on Climate Change Synthesis Report.

Various **cultural** stories relating to climate change or global warming were also evident in wider news coverage in March. To illustrate, **Gardian journalist Katharine Gammon reported** on how comedy is being harnessed to communicate about climate change. She wrote, "Climate change has increasingly featured in

television dramas and apocalyptic thrillers. But comedians like Perdue, as well as higher-profile acts like Michelle Wolf and Joel Kim Booster, are also taking on the climate crisis...By talking about climate, even irreverently, social scientists say, they may be helping to combat climate doom and boost civic engagement".

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“Humanity still has a chance, close to the last, to prevent the worst of climate change’s future harms, a top United Nations panel of scientists said. But doing so requires quickly slashing nearly two-thirds of carbon pollution by 2035, the IPCC said. The United Nations chief said it more bluntly, calling for an end to new fossil fuel exploration and for rich countries to quit coal, oil and gas by 2040. “Humanity is on thin ice – and that ice is melting fast,” United Nations Secretary-General Antonio Guterres said. “Our world needs climate action on all fronts – everything, everywhere, all at once.”

*- reported by Associated Press journalists Frank Jordans and Seth Borenstein*



Women push wheelbarrows atop a coal mine dump at the coal-powered Duvha power station, near Emalahleni east of Johannesburg. Photo: Denis Farrell/AP.

Finally, many *scientific* themes continued to emerge in media stories during the month of March through new studies, reports, and assessments. Prominently, the release of the United Nations Intergovernmental Panel on Climate Change Synthesis Report generated significant media coverage. For example, *Associated Press journalists Frank Jordans and Seth Borenstein reported*, “Humanity still has a chance, close to the last, to prevent the worst of climate change’s future harms, a top United Nations panel of scientists said Monday. But doing so requires quickly slashing nearly two-thirds of carbon pollution by 2035, the Intergovernmental Panel on Climate Change said. The United Nations chief said it more bluntly,

calling for an end to new fossil fuel exploration and for rich countries to quit coal, oil and gas by 2040. “Humanity is on thin ice – and that ice is melting fast,” United Nations Secretary-General Antonio Guterres said. “Our world needs climate action on all fronts – everything, everywhere, all at once.” Stepping up his pleas for action on fossil fuels, Guterres called for rich countries to accelerate their target for achieving net zero emissions to as early as 2040, and developing nations to aim for 2050 – about a decade earlier than most current targets. He also called for them to stop using coal by 2030 and 2040, respectively, and ensure carbon-free electricity generation in the developed world by 2035, meaning no gas-fired power plants either”.

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### APRIL

“A slew of climate records were broken, many of which have been, or are on course to be, broken again this year”



A meltwater stream flowing from the Tsanfleuron Glacier, Switzerland. The country is seeing its alpine glaciers melting at an increasingly rapid rate. Photo: FAbrice Coffrini/AFP/Getty Images.



Media coverage of climate change or global warming in newspapers around the globe **dropped 12%** from March 2023 and also **dipped 4%** from April 2022 levels. International wire services **decreased 16%** while radio coverage went **down 26%** from March 2023.

**A**pril media coverage of climate change or global warming in newspapers around the globe dropped 12% from March 2023 and also dipped 4% from April 2022 levels. International wire services decreased 16% while radio coverage went down 26% from March 2023. Compared to the previous month, coverage decreased in all regions: 4% lower in both the European Union (EU) and in North America, down 8% in Asia, 19% lower in Africa, down 23% in both Oceania and in the Middle East, and 33% lower in Latin America. Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through April 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage decreased 5%

while television coverage went down 7% from March. But coverage not uniformly trend either up or down across the US media sources: on ABC coverage increased 75%, coverage on CBS and PBS both doubled (+100%) and coverage tripled at *The Wall Street Journal*. Meanwhile, coverage at *The Washington Post* decreased 8%, as coverage dropped at *MSNBC* (-10%), *The New York Times* (-13%), *Fox* (-25%), *NBC* (-25%), *CNN* (-26%), *The Los Angeles Times* (-45%) and in the pages of *USA Today* (-64%).

Turning to the content of coverage, media attention to climate change or global warming was pervaded by **ecological** and **meteorological** themes. For instance, record-breaking heat across Asia – with connections to climate change – generated several news stories in April. For example, **Washington Post** journalist **Dan Stillman** wrote, “Numerous heat

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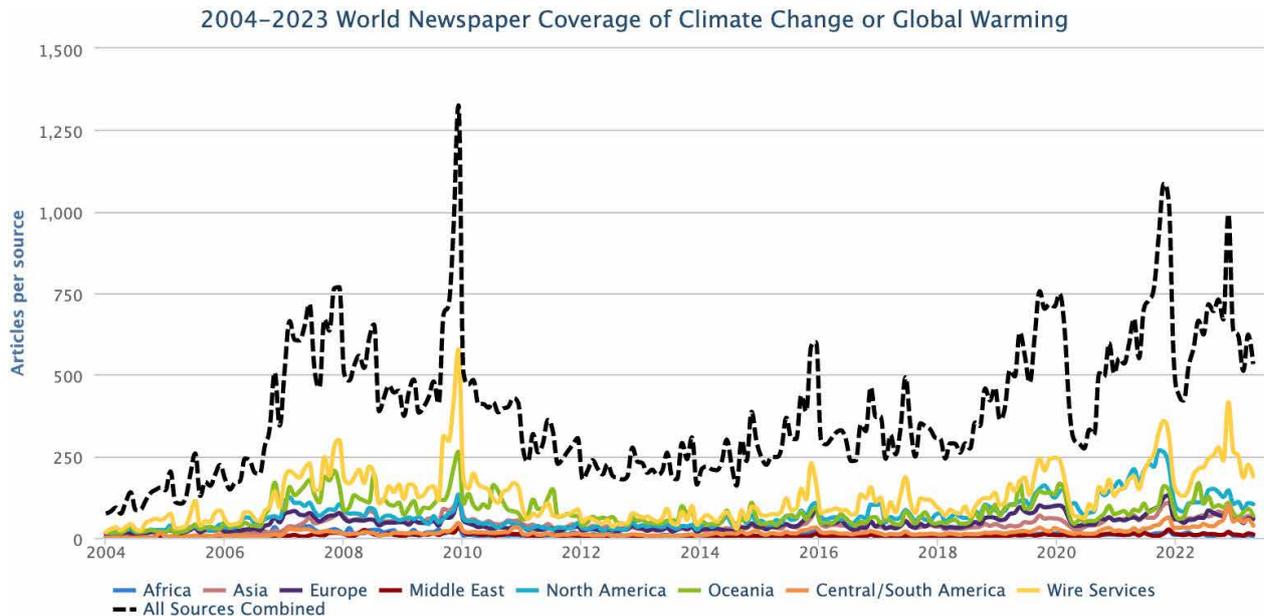


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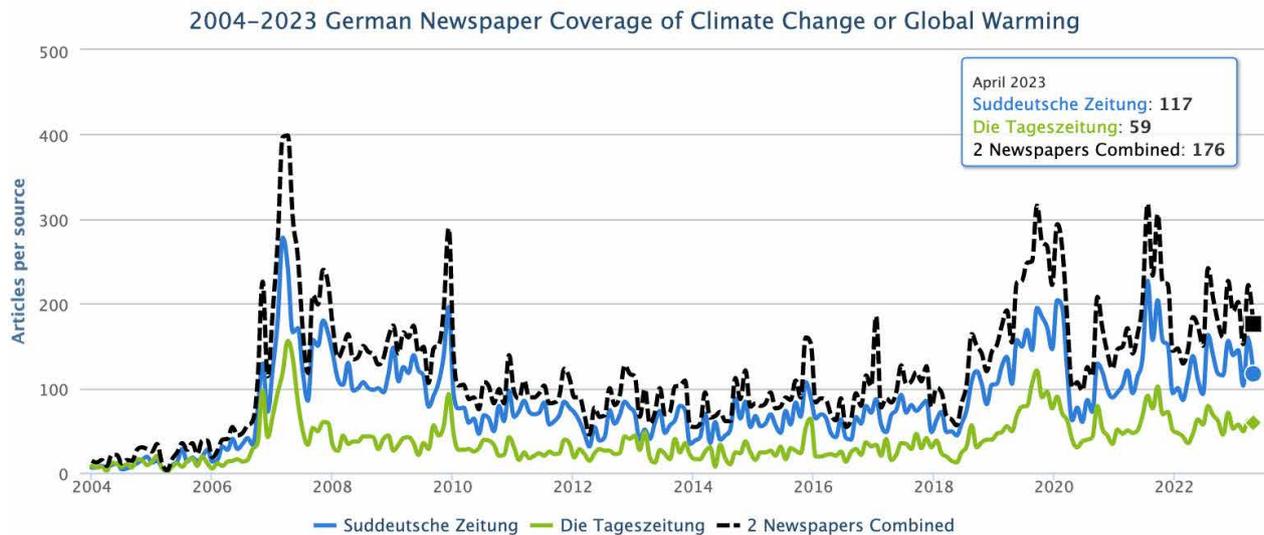


Figure 2. Newspaper coverage of climate change ('klimawandel') or global warming ('globale erwärmung') in two German newspapers (*Süddeutsche Zeitung* and *Die Tageszeitung*) from January 2000 through April 2023.

records have been broken across Southeast Asia, China and other parts of the continent in recent days as the region remains in the grip of a dangerously scorching heat wave, with Thailand in particular experiencing unusually extreme conditions. Weather historian Maximiliano Herrera is describing it as the “worst April heat wave in Asian history”... Meanwhile, hundreds of weather stations across China have seen their warmest April temperatures on record. Climate specialist Jim Yang tweeted that 109 weather stations across 12 provinces broke their record for high temperature for April on Monday. An

additional nine stations tied their April record for high temperature...China’s hottest months are typically June and July. Last year, the temperature reached as high as 113 degrees (45 Celsius) in Beibei in Chongqing province during a record-setting summer heat wave that dried up rivers and sparked forest fires...The hot days had been accumulating over the past few weeks, with Yuanjiang in Hunan province having exceeded 95 degrees (35 Celsius) for 22 straight days as of Friday...Studies have found that human-induced climate change is increasing the intensity and duration of heat waves in China. Elsewhere in

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the region, temperatures reached 112 degrees (44.6 Celsius) on Monday in Prayagraj, India. And in Bangladesh, the high temperature reached 109 degrees (43.0 Celsius) in Ishurdi, tying the April record for warmest temperature. Kalewa, Myanmar, set a new April high of 111 degrees (44.0 Celsius), while Nepal got to 107 degrees (41.7 Celsius). Bangladesh's capital, Dhaka, reached 105 degrees (40.6 Celsius)". Meanwhile, [Guardian correspondent Rebecca Ratcliffe added](#), "In Bangladesh, temperatures rose above 40C in the capital, Dhaka, earlier this month, marking the hottest day in 58 years and causing road surfaces to melt. The International Centre for Integrated Mountain Development (Icimod), an intergovernmental group, has raised particular concern about the impact of global heating on the Hindu Kush Himalaya region. The region holds the third largest body of frozen water in the world, and is warming at double the global average, according to the Icimod. "In the most optimistic scenario, limiting global warming to 1.5C, the region stands to lose one third of its glaciers by 2100 - creating huge risk to mountain communities, ecosystems and nature and the quarter of humanity downstream," said Deepshikha Sharma, a Climate and Environment Specialist at Icimod. "Human-induced climate change is the major cause of the growing number and ferocity of heat-waves we're seeing across Asia. These signal to the fact that the climate emergency is here for this region," said Sharma, who called for faster emissions reductions and increased investment to help protect areas adapt".

Meanwhile, drought across East Africa - with connections to a changing climate - made news in April. For example, [Guardian journalist Fiona Harvey wrote](#), "The devastating drought in the Horn of Africa would not have happened without the human-made impact of the climate crisis, new science has shown. The drought has affected about 50 million people in the Horn of Africa directly and another 100 million in the wider area. About 20 million people are at risk of acute food insecurity and potentially famine. The region has been suffering its worst drought in 40 years since October 2020, with extended

"The world will likely use fewer fossil fuels to produce electricity this year in a "turning point" for planet-friendly energy, a new report says. It would be the first ever annual drop in the use of coal, oil and gas to generate electricity, outside of a global recession or pandemic."



China added around 40% of the world's new solar panels last year, with large numbers of rooftop installations. Photo: Getty Images.

dry conditions punctuated by short intense rainfall that has often led to flash flooding. There have been five consecutive seasons of rainfall below normal levels. At least 4.35 million people are in need of humanitarian assistance, and at least 180,000 refugees have fled Somalia and South Sudan for Kenya and Ethiopia, which have also been affected by the drought".

Moreover, [political](#) and [economic](#)-themed media stories about climate change or global warming continued to unfold in April. Among these stories, in the US, Environmental Protection Agency regulatory actions to reduce emissions from vehicles prompted media coverage early in the month. For example, [Associated Press correspondent Sophie Austin reported](#), "The Biden administration cleared the way Friday for California's plan to phase out a wide range of diesel-powered trucks, part of the state's efforts to drastically cut planet-warming emissions

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Figure 3. Examples of newspaper front pages with climate change stories in April.

and improve air quality in heavy-traffic areas like ports along the coast. The decision by the U.S. Environmental Protection Agency allows California – which has some of the nation’s worst air pollution – to require truck manufacturers to sell an increasing number of zero-emission trucks over the next couple of decades. The rule applies to a wide range of trucks including box trucks, semitrailers and even large passenger pick-ups”.

Also in April, burgeoning wind and solar energy production for electricity – as reported on in the [Global Electricity Review report](#) – sparked several media stories. For example, [BBC journalist Matt McGrath reported](#), “The world will likely use fewer fossil fuels to produce electricity this year in a “turning point” for planet-friendly energy, a new report says. It would be the first ever annual drop in the use of coal, oil and gas to generate electricity, outside of a global recession or pandemic. As a result, fewer warming gases would be released during energy production. The authors attribute the expected change to a boom in renewable energy led mainly by China”.

As April continued to unfold, further actions from the US Biden Administration – such as the creation of an Office of Environmental Justice – garnered media attention. For example, [USA Today journalists Doyle Rice and Dinah Voyles Pulver wrote](#), “On the eve of Earth Day, President Joe Biden announced the creation of an Office of Environmental Justice as he lays out a plan to make it “the mission of every single executive agency,” the White House said. As part of an executive order, the new office will coordinate environmental justice efforts across the federal government. The order presses agencies to close gaps in data and use scientific research

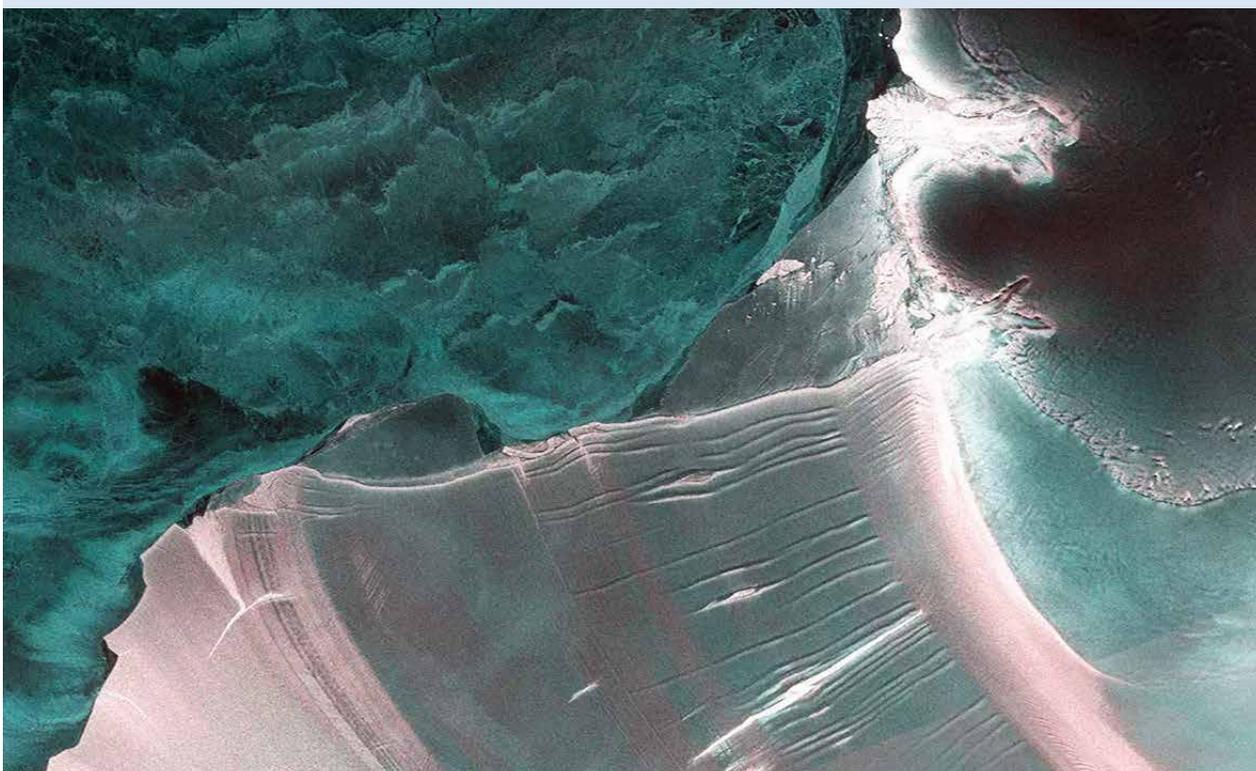
to understand and prevent the damage to people’s health brought by pollution. The White House calls it “the most ambitious environmental justice agenda in our nation’s history.” The action is the result of nearly two decades of organizing by the environmental justice movement, said the Climate Justice Alliance, a nonprofit representing 89 rural and urban community-based environmental justice organizations”.

Various *cultural* stories relating to climate change or global warming were also evident in wider news coverage in April. To illustrate, food shortages across Madagascar – with links to climate change – led to media attention. For example, [Associated Press correspondent Sarah Tetaud wrote](#), “Battered by three intense cyclones in the space of a year, southeast Madagascar is experiencing the knock-on effect of those climatic disasters: “catastrophic” hunger in remote, inaccessible areas...Cyclone Batsirai hit in February 2022, followed two weeks later by Cyclone Emnati. Then, Cyclone Freddy made landfall on the Indian Ocean island in February of this year. The combined impact left 60%-90% of farming areas in the southeast badly damaged and food crops largely destroyed, according to a report by UNICEF and Madagascar’s National Office for Nutrition...People living in remote districts like coastal Nosy-Varika and the mountainous region of Ikongo were extremely vulnerable to hunger before the cyclones, and children across southeast Madagascar experienced chronic malnutrition, according to Brian Willett, head of mission in Madagascar for Doctors Without Borders, also known as Médecins Sans Frontières. “But with the repeated climate

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“Today, the fastest withdrawing glaciers in Antarctica are seen to retreat by up to 30m a day. But if they sped up, the extra melt water would have big implications for sea-level rises around the globe. Ice losses from Antarctica caused by climate change have already pushed up the surface of the world’s oceans by nearly 1cm since the 1990s.”



Satellites can map the retreat of Antarctic glaciers but their record is short - just 40 years or so. Photo: Copernicus EU/ESA.

shocks of the past year, their resilience has been exceeded,” he said. “Today, 1 in 4 children is acutely malnourished. Without medical support, these children are at risk of dying.”

Finally, many *scientific* themes continued to emerge in media stories during the month of April through new studies, reports, and assessments. Prominently, a [study in Nature](#) found faster ice melt in the Arctic than previously detected, and that generated media attention. For example, [Washington Post correspondents Kasha Patel and Chris Mooney reported](#), “At the end of the last ice age, parts of an enormous ice sheet covering Eurasia retreated up to a

startling 2,000 feet per day – more than the length of the Empire State Building, according to a study released Wednesday. The rate is easily the fastest measured to date, upending what scientists previously thought were the upper speed limits for ice sheet retreat – a finding that may shed light on how quickly ice in Greenland and Antarctica could melt and raise global sea levels in today’s warming world. Scientists monitor ice sheet retreat rates to better estimate contributions to global sea level rise. Antarctica and Greenland have lost more than 6.4 trillion tons of ice since the 1990s, boosting global sea levels by at least 0.7 inches (17.8 millimeters). Together, the two ice sheets

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are responsible for more than one-third of total sea level rise. The rapid retreat found on the Eurasian Ice Sheet far outpaces the fastest-moving glaciers studied in Antarctica, which have been measured to retreat as quickly as 160 feet per day. Once the ice retreats toward the land, it lifts from its grounding on the seafloor and begins to float, allowing it to flow faster and increase the contribution to sea level rise. If air and ocean temperatures around Antarctica were to increase as projected and match those at the end of the last ice age, researchers say ice marching backward hundreds of feet in a day could trigger a collapse of modern-day glaciers sooner than previously thought. That could be devastating for global sea levels". Meanwhile, **BBC journalist Jonathan Amos wrote**, "Antarctica's melting ice sheet could retreat much faster than previously thought, new research suggests. The evidence comes from markings on the seafloor off Norway that record the pull-back of a melting European ice sheet thousands of years ago. Today, the fastest withdrawing glaciers in Antarctica are seen to retreat by up to 30m a day. But if they sped up, the extra melt water would have big implications for sea-level rises around the globe. Ice losses from Antarctica caused by climate change have already pushed up the surface of the world's oceans by nearly 1cm since the 1990s. The researchers found that with the Norwegian sheet, the maximum retreat was more than 600m a day".

Also in April, a United Nations World Meteorological Organization report pointed to connections between climate change and disaster events. For example, **CNN journalist Laura Paddison reported**, "Droughts, floods and record low ice levels - from the top of the world's mountains to the depths of the

ocean, the climate crisis took a heavy toll as it continued to intensify in 2022, new analysis from the World Meteorological Organization shows. The WMO's annual State of the Climate Report, published Friday ahead of Earth Day, is essentially a health checkup for the world. It analyzes a series of global climate indicators - including levels of planet-heating pollution, sea level rise and ocean heat - to understand how the planet is responding to climate change and the impact it is having on people and nature. The findings paint a stark picture...A slew of climate records were broken, many of which have been, or are on course to be, broken again this year:

- Oceans reached record high temperatures, with nearly 60% experiencing at least one marine heatwave.
- Global sea levels climbed to the highest on record due to melting glaciers and warming oceans, which expand as they heat up.
- Antarctica's sea ice dropped to 1.92 million square kilometers in February 2022, at the time the lowest level on record (the record was broken again this year).
- The European Alps saw a record year for glacier melt, with Switzerland particularly badly affected, losing 6% of its glacier volume between 2021 and 2022.
- Levels of planet warming pollution, including methane and carbon dioxide, reached record highs in 2021, the latest year for which there is global data.

These broad climate indicators are an important reflection of the state of the planet, the report noted, but extreme weather events - fueled by climate change - are where the immediate effects are most felt".

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### MAY “Tensions have flared”



Group of 7 leaders at the Itsukushima Shrine in Japan on Friday. Their final communiqué only modestly modified previous language on natural gas investment. Photo: Kenny Holston/The New York Times.



Media coverage of climate change or global warming in newspapers around the globe **increased 8%** from April 2023 but **dropped 9%** from May 2022 levels. International wire services **increased 11%** while radio coverage also **increased 56%** from April 2023.

**M**ay media coverage of climate change or global warming in newspapers around the globe increased 8% from April 2023 but dropped 9% from May 2022 levels. International wire services increased 11% while radio coverage also increased 56% from April 2023. Compared to the previous month, coverage increased in North America (5%), the European Union (EU) (6%), Oceania (7%), Asia (9%), Africa (30%), and the Middle East (57%). In May, coverage only decreased in the Latin American region (-1%). Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through May 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage remained

about the same from the previous month of April, but was down 8% from May 2022. In Canada, coverage went up 14% from coverage in April 2023 and remained about the same quantity from May 2022.

Turning to the content of coverage, *political* and *economic*-themed media stories about climate change or global warming shaped overall coverage in the month of May. To begin, several media stories made connections between Canadian wildfires, smoke drifting to the intermountain US western states and air quality as well as climate policy actions. For example, *Washington Post* correspondent **Diana Leonard reported**, “An all-too-familiar scene is playing out in western Canada this week: forests in flames amid extreme heat while hazardous smoke engulfs cities downwind of the fires. Over the last several years, similar scenes

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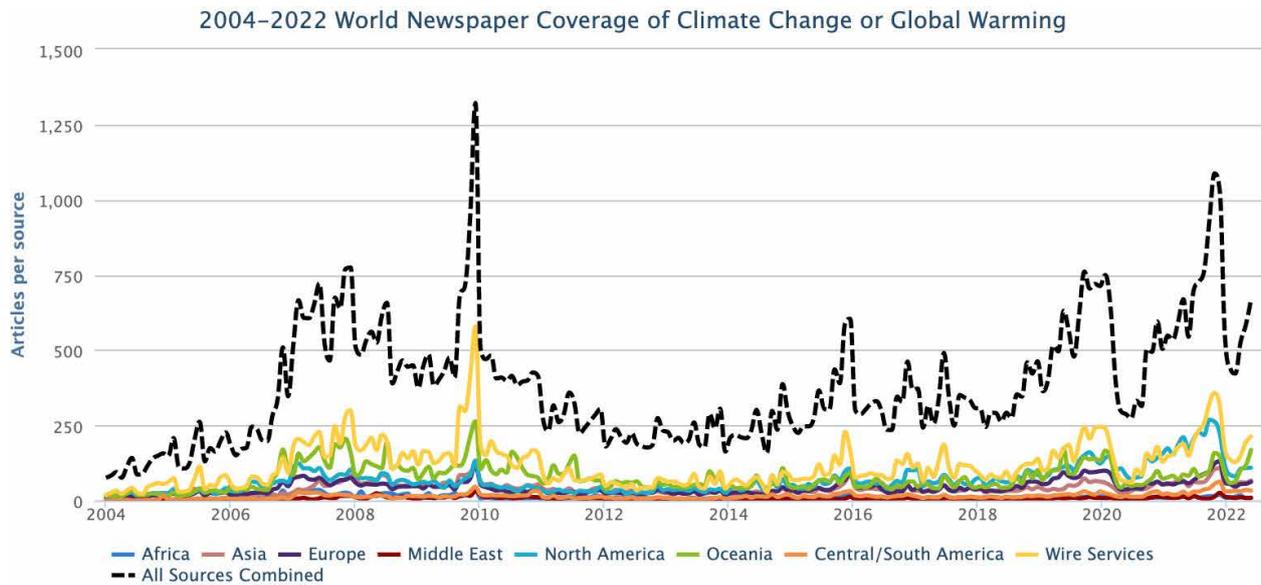


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through May 2023.

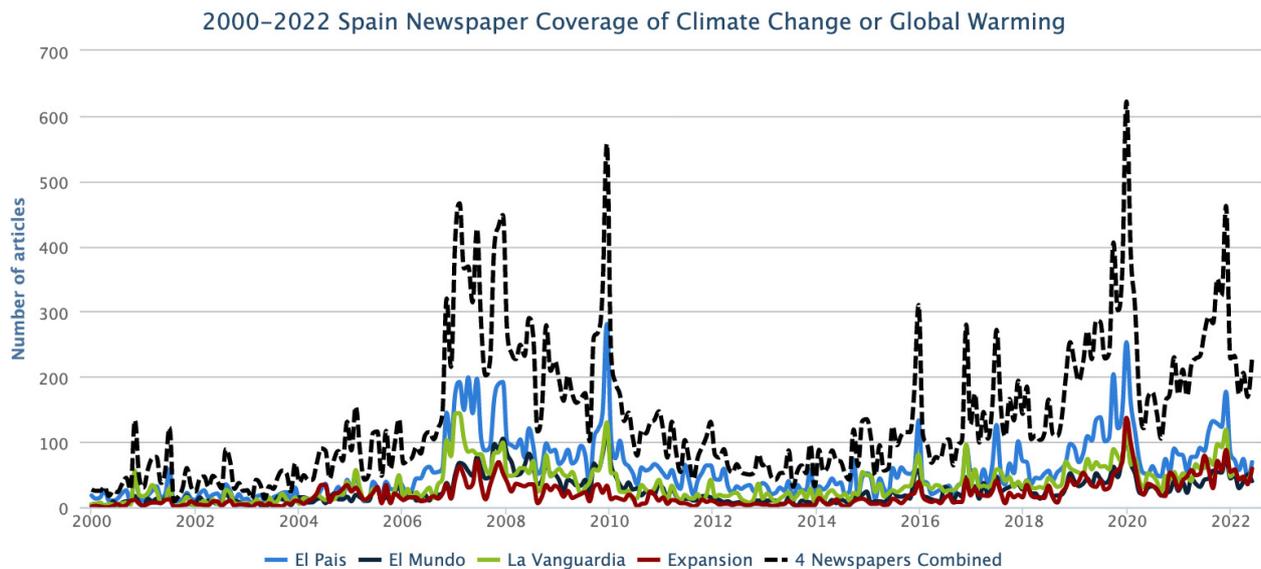


Figure 2. Newspaper coverage of climate change or global warming in three Canadian newspapers (*Globe and Mail*, *Toronto Star*, and *National Post*) from January 2000 through May 2023.

have unfolded across the globe, including in Australia, California, the Pacific Northwest, Europe and China. As both heat waves and wildfires worsen, recent research is tying these extremes ever more strongly to climate change, painting a troubling picture if the world continues on its emissions path. About 1.3 million hectares (3.2 million acres) have burned so far this year in Canada, which is far above the 20-year average of 55,050 hectares for this point in the season, according to data from the Canadian Interagency Forest Fire Center. Firefighting agencies are at preparedness

level 5 nationally, the highest level, and extra resources from the United States have joined the fight.”

Meanwhile, *New York Times* journalist **Ian Austen** observed, “When I arrived in Alberta recently to report an upcoming political story, there was no shortage of people wanting to talk about politics and the provincial election on May 29. But, even as wildfires flared earlier than usual and raged across an unusually wide swath of forest, discussions about climate change were largely absent... I asked Feodor

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Snagovsky, a professor of political science at the University of Alberta, about this apparent disconnect in Alberta between public opinion about climate change and campaign discourse. “It’s very tough to talk about oil and gas in Alberta because it’s sort of the goose that lays the golden egg,” he said. “It’s the source of a remarkable level of prosperity that the province has enjoyed for a long time.” This year oil and gas revenues will account for about 36 percent of all the money the province takes in. And during the oil embargo of the late 1970s, those revenues were more than 70 percent of the province’s budget. Among other things, that has allowed Alberta to be the only province without a sales tax and it has kept income and corporate taxes generally low relative to other provinces. But oil and gas production account for 28 percent of Canada’s carbon emissions, the country’s largest source. While the amount of carbon that’s released for each barrel produced has been reduced, increases in total production have more than offset those gains. The energy industry is also an important source of high-paying jobs, though. So the suggestion that production might have to be limited in order for Canada to meet its climate targets raises alarms”.

In mid-May, the gathering of the Group of 7 (G7) nations in Japan generated several climate change-related stories from the discussions. For example, [New York Times](#) journalists [Motoko Rich](#), [Lisa Friedman](#) and [Jim Tankersley](#) wrote, “In theory, the world’s largest industrialized democracies have agreed to stop using fossil fuels within a little over a quarter-century and to switch to new sources of power such as solar and wind as fast as they can. But as leaders of the Group of 7 gathered in Hiroshima, Japan, this weekend for their annual meeting, some countries were wrangling over whether to loosen commitments to phase out the use of carbon-emitting fuels like gas and coal in time to avert the worst effects of global warming. The final communiqué from the summit, released on Saturday afternoon, included language sought by Japan that blesses continued investment in certain types of coal-fired power plants that

“Jarred by the invasion of Ukraine, countries in Europe are seeking to quickly secure sources of natural gas to keep the lights on. At the same time, countries like Japan and even to some degree the United States are seeking to protect longstanding investments in the fossil fuel industry at home or abroad...”



A solar panel energy farm in Philipsburg, NJ, in 2021. The United States has moved to incentivize renewable energy investment. Photo: Erin Schaff/New York Times.

the Japanese government is helping to finance. But leaders only modestly modified language from last year’s meeting that supported some new investment in natural gas infrastructure. Germany, which pushed for the endorsement in 2022 as it scrambled to replace Russian gas imports in the wake of the invasion of Ukraine, had sought to broaden the wording this year. The behind-the-scenes battle underscored the political, economic and practical challenges that many Group of 7 nations have run into as they seek to accelerate a global energy transition with trillions of dollars in government incentives. Jarred by the invasion of Ukraine, countries in Europe are seeking to quickly secure sources of natural gas to keep the lights on. At the same time, countries like Japan and even to some degree the United States are seeking to protect longstanding investments

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in the fossil fuel industry at home or abroad... But tensions have flared in the coalition over efforts by some countries to lock in their access to fossil fuels for decades to come. According to three people familiar with the discussions, the German government, concerned about securing enough energy to power its economy, pushed in Hiroshima to loosen the language that leaders released last year just months after the start of Russia's war on Ukraine. The 2022 communiqué endorsed public investment in gas, but only in "exceptional circumstances" and as a "temporary response" to relieve nations from dependency on Russian energy. Any expansion, the statement said, should not derail nations from their pledges to slash greenhouse gas emissions. The 2023 statement repeated that language and did not go much further".

Meanwhile, in Europe a French government decision to ban three flights where there was train replacement service of 2.5 hours or less generated considerable media attention. For example, an [editorial in \*El País\*](#) entitled 'More train and less plane' discussed "the decision of the French Government to prohibit internal flights that have an alternative train lasting less than two and a half hours has more symbolic than effective value, but it establishes a first precedent (...) with it France takes the lead in one of the policies that the European Union wants to promote to curb climate change. In those countries with a good high-speed rail development, it does not make sense to cover journeys by plane that have a much lower environmental cost by train. The approved proposal is one of the 149 that emerged from a citizen assembly on measures against climate change, convened by the Government of Emmanuel Macron (...) It is just a first step destined to be expanded in the future and inspire similar measures in other countries. The third European aviation environmental report estimates that CO<sub>2</sub> – the main gas causing global warming – emitted by planes that took off in European airspace increased by 34% between 2005 and 2019, and the European Aviation Safety Agency itself estimates that up to 2050 could increase a further 28% without measures to correct this trend".

Later in the month, pressure mounted on the upcoming UN climate negotiations president Sultan Al-Jaber to step down. He is set to represent host nation United Arab Emirates and also runs the state-owned Abu Dhabi National Oil Company. For example, [Washington Post journalist Maxine Joselow noted](#), "More than 130 members of Congress and the European Parliament on Tuesday called for the ouster of the oil executive leading the next U.N. Climate Change Conference in the United Arab Emirates this fall. Tuesday's letter represents a remarkable rebuke of the decision to name Sultan Al Jaber, who runs the state-owned Abu Dhabi National Oil Company, as president of the climate summit. It comes as human rights advocates also voice anger and disbelief over the UAE's invitation of Syria's embattled president to the climate talks, known as COP28. Both climate and human rights activists say the integrity of the climate gatherings are at stake".

In the US, private insurance company State Farm's decision to no longer offer new home insurance to any Californians – citing reasons of climate-connected wildfire, flood and drought risk – made several headlines as a watershed moment in climate risk meeting insurers' risk limits. For example, [USA Today journalist Francisco Guzman reported](#), "State Farm will no longer provide home insurance to new California customers because of wildfire risks and an increase in construction costs, the company said Friday. On Saturday, the insurance company stopped accepting applications for business and personal lines and casualty insurance in California, the company said in a news release. State Farm said it made this decision because of "historic increases in construction costs outpacing inflation, rapidly growing catastrophe exposure and a challenging reinsurance market." Meanwhile, [Guardian reporter Gloria Oladipo added](#), "Existing customers insured by State Farm will not be impacted by the decision. In response to State Farm's statement, a spokesperson with the California department of insurance told Fox Business News that it is working to protect homeowners. "The factors driving

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State Farm's decision are beyond our control, including climate change, reinsurance costs affecting the entire insurance industry and global inflation," said the spokesperson.

Also in the month of May, media attention to climate change or global warming was punctuated by *ecological* and *meteorological* themes. For instance, a heat wave across Asia in early May prompted media portrayals making links to longer-term climate change. For example, *Guardian and Agence France Presse reported*, "Vietnam has reported a record-high temperature of 44.1C (111.38F), as weather experts and authorities told the population to remain indoors during the hottest parts of the day. Scientists have said global warming is aggravating adverse weather. Neighbouring countries registered record temperatures during a heatwave in Asia in April. Vietnam's record was measured indoors at Hoi Xuan station in northern Thanh Hoa province on Saturday, the National Centre for Hydro Meteorological Forecasting said, breaking the 2019 record of 43.4C. Nguyen Thi Lan, a farmer, said temperatures in the central city of Danang had forced workers to start their days earlier than ever. "We have had to finish before 10am to avoid the heat," she said. Vietnam's weather varies from north to south, but the country as a whole is now entering its hottest summer months. "This is a worrying record in the context of climate change and global warming," Nguyen Ngoc Huy, a climate change expert, said from the capital, Hanoi. "I believe this record will be repeated many times. It confirms that extreme climate models are being proven to be true."

Also in May, Category 5 Cyclone Mocha that battered parts of south and southeast Asia made news, with several stories linking this extreme event to climate change or global warming.

"Vietnam has reported a record-high temperature of 44.1C (111.38F), as weather experts and authorities told the population to remain indoors during the hottest parts of the day. Scientists have said global warming is aggravating adverse weather. Vietnam's record was measured indoors at Hoi Xuan station in northern Thanh Hoa province, breaking the 2019 record of 43.4C."



Thousands of street vendors in Vietnam have had no choice but to work through recent heatwaves. Photo: Nhac NGUYEN.

For example, *Associated Press correspondent Julhas Alam reported*, "Thousands of people hunkered down Sunday in monasteries, pagodas and schools, seeking shelter from a powerful storm that slammed into the coast of Myanmar, tearing roofs off buildings and killing at least three people. Cyclone Mocha made landfall Sunday afternoon in Myanmar's Rakhine state near Sittwe township with winds of up to 209 kilometers (130 miles) per hour, Myanmar's Meteorological Department said. The storm previously passed over Bangladesh's Saint Martin's Island, causing damage and injuries, but turned away from the country's shores before landfall. As night fell, the extent of the damage in Sittwe was not clear. Earlier in the day, high winds crumpled cell phone towers, cutting off communications in much of the area. In videos collected by local media before

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communications were cut off, deep water races through streets while wind lashes trees and pulls boards off roofs. Rakhine-based media reported that streets were flooded, trapping people in low-lying areas in their homes as worried relatives outside the township appealed for rescue...Climate scientists say cyclones can now retain their energy for many days. Cyclone Amphan in eastern India in 2020 continued to travel over land as a strong cyclone and caused extensive devastation”.

Wildfires across Alberta, Canada and then in Nova Scotia, Canada in May generated media attention. For example, *New York Times* journalists Dan Bilefsky and Meagan Campbell

wrote, “As wildfires buffeted western Canada on Tuesday, a blaze on the opposite end of the country in Halifax, Nova Scotia, has forced the evacuation of more than 16,000 people, compounding the national anxiety over out-of-control wildfires upending peoples’ lives. Video footage of downtown Halifax late Sunday showed a dense plume of smoke enveloping the city, the sun an apocalyptic red, as a fire northwest of the city raged, spreading the smoke. The blaze broke out in an area that is about 15 miles from Halifax and that is home to many suburban professionals and families. Wildfires have broken out throughout western Canada, including British Columbia, and hardest hit has been Alberta, an oil- and gas-producing



Figure 3. Examples of newspaper front pages with climate change stories in May.

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province sometimes referred to as “the Texas of the North.” Earlier this month, the province declared a state of emergency. Climate research suggests that heat and drought associated with global warming are major reasons for bigger and stronger fires”.

Meanwhile, in Italy the same region that suffered from drought in summer was inundated by flooding in May, causing 14 deaths and 20,000 evacuees that garnered media attention. For example, *La Vanguardia* journalist **Anna Buj** wrote, “The phenomena that have hit Emilia-Romagna and, previously, Ischia or the Marches, are still exceptional, but in reality they are part of a new normality in a context of climate change. In particular, something happened in this region in 15 days that some time ago we would have expected to happen every 30 or 50 years”, explains Francesca Giordano, a researcher at the Higher Institute for Environmental Protection and Research. “It rains differently, more concentrated. If the increase in temperatures is added to this, what awaits us in the future scenario is a greater forecast of heat waves, which will also endanger the most fragile citizens”, she points out”. Yet, in Spain *La Vanguardia* journalist **Laura Aragón** wrote, “The first day of summer now comes a month earlier than in the sixties. Each time 30°C is reached earlier in Spain. If during the sixties and eighties the first day of summer was recorded for the first time at the beginning of May, now it is reached in April, on average. Almost a month before. Climate change extends summer in time and cuts part of spring and a good part of autumn (...) If 2022 ended as the warmest since records began in 1961, 2023 is on its way to reissue the anniversary”. Concurrently, in North Africa *El País* journalist **Juan Carlos Sanz** noted, “Morocco suffers the worst drought in 40 years, in a situation of water stress since 2021 due to the lack of rain and the increase in temperatures due to climate change”.

“Climate activists have stepped up protests over the inclusion of a provision to speed up a controversial gas pipeline’s completion in the deal to raise the debt ceiling as Congress prepares to vote on Wednesday, aiming criticism at Democrats Chuck Schumer and Joe Manchin.”



Protesters in Brooklyn outside the home of Chuck Schumer. Activists have urged Democrats to remove the pipeline provision from the debt ceiling deal. Photo: Ken Schles/Food and Water Watch.

Furthermore, *cultural* stories relating to climate change or global warming were also evident in wider news coverage in May. In particular, many protests and social movement activities earned media attention in May. To illustrate, in early May climate activists that disrupted the Met Gala in New York City garnered media coverage. For example, *Los Angeles Times* correspondent **Emily St. Martin** reported, “It’s Met Gala Monday and not everyone was excited. Climate protesters blocked Paris Hilton’s car from arriving at the Costume Institute’s grand ball and models condemned the gala’s honoree on the Met’s steps. The 2023 Met Gala kicked off with a bang (and a few honks) at the Metropolitan Museum of Art in New York City. It’s the most extravagant red carpet haute couture event of the year, which depending on whom you ask is “the Super Bowl of fashion events” (André Leon Talley) or “such a jerk parade” (Tina Fey)”.

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As the month unfolded, further protests in Europe grabbed media headlines. For example, **CNN correspondent Barbie Latza Nadeau reported**, “Climate change activists turned the blue water of the Trevi Fountain in central Rome black with diluted charcoal on Sunday. Around 10 activists from the climate group Ultima Generazione (Last Generation) entered the 18th century late-Baroque fountain holding a banner that said, “Let’s not pay for fossil campaigns considering what is happening in Emilia Romagna,” referring to the deadly flooding in northern Italy, which some experts have linked to the climate crisis. “Our country is dying,” other banners stated. All activists were arrested and face vandalism charges, Rome police said”.

From Rome to Geneva, **Guardian correspondent Rupert Neate noted**, “Dozens of climate activists have disrupted Europe’s largest private jet trade fair by chaining themselves to aircraft to protest against the sector’s carbon emissions. The demonstrators on behalf of Greenpeace, Stay Grounded, Extinction Rebellion and Scientist Rebellion also attached themselves to the entrance gates of the event at Geneva airport in the hope of preventing prospective buyers from entering the annual show. The activists, who were calling for a global ban on the use of private jets because of their carbon footprint, stuck tobacco-style health warning labels on some of the jets at the European Business Aviation Convention and Exhibition (EBACE) saying private jets “burn our future”, “kill our planet”, and “fuel inequality”.”

From Rome and Geneva to Berlin, **Associated Press journalist Kirsten Grieshaber wrote**, “German Chancellor Olaf Scholz on Monday sharply criticized climate activists as “nutty” for drastic protests such as blocking streets or gluing themselves to famous paintings in museums. “I think it’s completely nutty to somehow stick yourself to a painting or on the street,” Scholz said during a visit to an elementary school in the town of Kleinmachnow outside of Berlin, German news agency dpa reported. The chancellor added that he did not think anybody’s opinion on climate change could be changed

by such actions but rather that these protests made people angry. “That’s an action that I don’t think is going to help,” Scholz told the students. Members of the group Last Generation have repeatedly blocked roads across Germany in an effort to pressure the government to take more drastic action against climate change. In recent weeks, they’ve brought the traffic to a halt on an almost daily basis in Berlin, gluing themselves to busy junctions and highways. They’ve also glued themselves to various paintings in Berlin and elsewhere over the past year”.

Then at the end of the month, climate demonstrations crossed over to the US with a protest about Senator Chuck Schumer’s role in negotiating permitting of the Mountain Valley pipeline in order to get the debt ceiling to potentially pass. For example, **Guardian correspondent Dharna Noor reported**, “Climate activists have stepped up protests over the inclusion of a provision to speed up a controversial gas pipeline’s completion in the deal to raise the debt ceiling as Congress prepares to vote on Wednesday, aiming criticism at Democrats Chuck Schumer and Joe Manchin. The pipeline project has long been championed by Manchin, the West Virginia senator who was the top recipient of fossil fuel industry contributions during the 2022 election cycle. Activists, led by the advocacy group Climate Defiance and supported by Food and Water Watch, Climate Families NYC, Center for Popular Democracy, Sunrise Movement NYC and others, rallied outside the Senate majority leader’s home in Brooklyn’s Park Slope neighborhood on Tuesday evening, chanting “Schumer, stop the dirty deal” and demanding the \$6.6bn Mountain Valley Pipeline be stripped from the legislation. Schumer has also received donations from one of the companies behind the pipeline. The protests came hours after nearly 200 groups sent a letter to Schumer and members of Congress remove the pipeline from the deal”.

Finally, many **scientific** themes continued to emerge in media stories during the month of May through new studies, reports, and

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assessments. To illustrate, a [study](#) by the Union of Concerned Scientists, published in the journal *Environmental Research Letters* quantified how greenhouse gas emissions have exacerbated wildfires in the US and Canada. This study gained media coverage in several outlets. For example, [CNN journalist Rachel Ramirez reported](#), “Millions of acres scorched by wildfires in the Western US and Canada – an area roughly the size of South Carolina – can be traced back to carbon pollution from the world’s largest fossil fuel and cement companies, scientists reported Tuesday. The study by the Union of Concerned Scientists, published in the journal *Environmental Research Letters*, found that 37% of the area burned by wildfires in the West since 1986 – nearly 19.8 million acres out of 53 million – can be blamed on the planet-cooking pollution from 88 of the world’s major fossil fuel producers and cement manufacturers, the latter of which have been shown to produce around 7% of all carbon dioxide emissions. The amalgam of megadrought and record-breaking heat that’s drying out vegetation due to climate change has stoked the West’s wildfires. And researchers found that since 1901, the fossil fuel activities of these companies, including ExxonMobil and BP, among others, warmed the planet by 0.5 degrees Celsius – nearly half of the global increase during that period. Carly Phillips, a research scientist with the Science Hub for Climate Litigation at the Union of Concerned Scientists and co-author on the study, said the findings add to a significant library of research that directly links climate change or the impacts of the crisis to burning fossil fuel”.

Further into the month of May, observations that rising sea surface temperatures – the highest since 1982 – sparked media accounts. For example, [CNN correspondent Laura Paddison](#)

[reported](#), “Ocean surface heat is at record-breaking levels. Temperatures began climbing in mid-March and skyrocketed over the course of several weeks, leaving scientists scrambling to figure out exactly why. Temperatures have fallen since their peak in April – as they naturally do in the spring – but they are still higher than they have ever been on record for this time of year. “It is remarkable,” said Gregory C. Johnson, an oceanographer at the National Oceanic and Atmospheric Administration, which calculates the ocean surface temperature using a network of ships, buoys, satellites and floats. Although it’s still preliminary data, if it holds up, he said, “this is another milestone.” The record may not seem huge – it’s nearly two-tenths of a degree higher than the previous record in 2016 – but given how much heat is needed to warm up this huge body of water, “it’s a massive amount of energy,” Matthew England, professor of ocean and climate dynamics at the University of New South Wales, Australia, told CNN”. Meanwhile, [NBC News reporter Evan Bush noted](#), “As ocean surface temperatures soar to record highs, the World Meteorological Organization said Wednesday it expects a shift toward El Niño by this fall, which could shake up weather patterns and trigger more extreme weather events in the U.S. and other parts of the world. Forecasters expect the temporary El Niño pattern to alter rainfall patterns, elevate average air temperatures and contribute to more intense storm systems. The El Niño pattern, which is a temporary and natural climate anomaly, will layer on top of the warming attributable to human-caused climate change. Both trends push average air and sea temperatures higher. Daily sea surface temperatures last month reached highs not seen in at least four decades of recordkeeping”.

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**JUNE**

“An accumulation of the heat-trapped gases ‘not seen for millions of years’”



The Statue of Liberty from the Staten Island Ferry during heavy smog in New York, June 6, 2023. Photo: Ed Jones/AFP.



Media coverage of climate change or global warming in newspapers around the globe **increased 8%** from May 2023 and was also **3% higher** than June 2022 levels. International wire services **increased 15%** while radio coverage similarly went **up 10%** from May 2023.

**J**une media coverage of climate change or global warming in newspapers around the globe increased 8% from May 2023 and was also 3% higher than June 2022 levels. International wire services increased 15% while radio coverage similarly went up 10% from May 2023. Compared to the previous month, coverage increased in Africa (+5%), the European Union (EU) (+8%), Asia (+9%), Latin America (+14%), and in North America (+20%). Meanwhile, coverage dipped from the previous month of May in the Middle East (-17.5%), and in Oceania (-22%). Figure 1 shows trends in newspaper media coverage at the global scale - organized into seven geographical regions around the world - from January 2004 through June 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage increased 17% while Canadian print coverage went up 25%

(see Figure 2) in June 2023 from the previous month. Coverage was up on the US and Canada respectively 11% and 12% in June 2023 from the previous year of June 2022.

Moving from the quantity of coverage to its content, *political* and *economic*-themed media stories about climate change or global warming shaped a good bit of coverage in the month of June. To begin, media attention was paid to a United Nations Environment Program (UNEP) agreement to cut plastics pollution, with connections made to climate change. For example, *Associated Press correspondents Angela Charlton and Jennifer McDermott reported*, “Global negotiators have agreed to craft a draft treaty to end plastic pollution, a preliminary but crucial step toward tackling one of the most lasting sources of human waste. Environmental advocates cautiously welcomed the outcome of five days of U.N. talks in Paris

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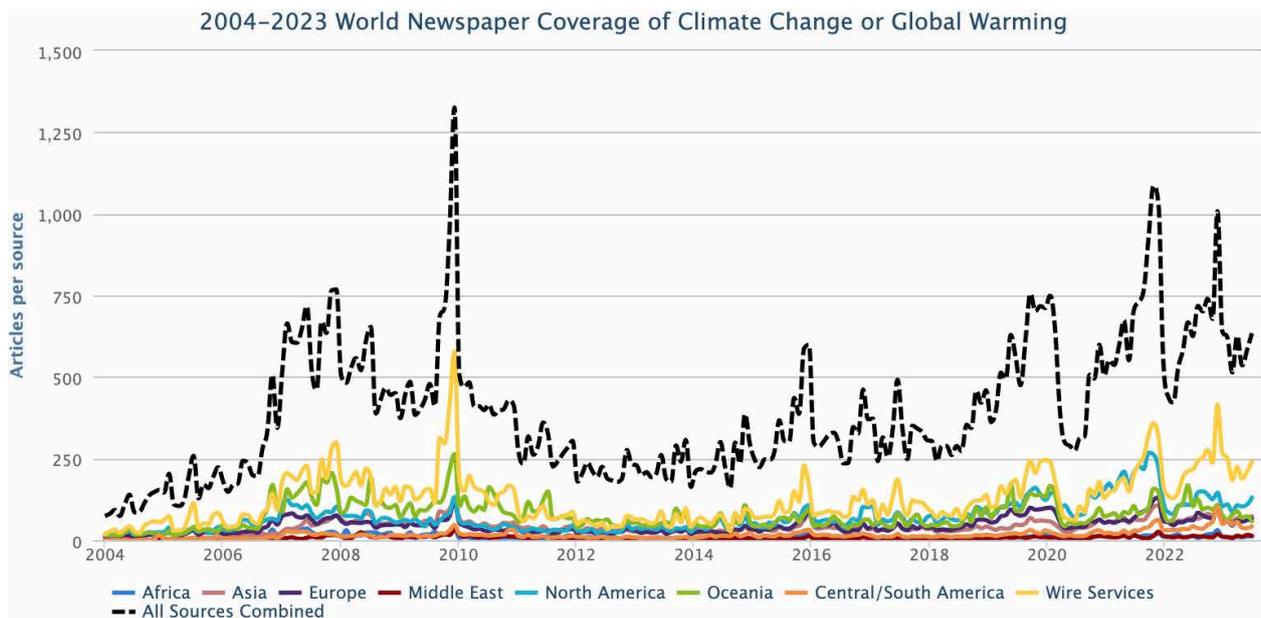


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through June 2023.

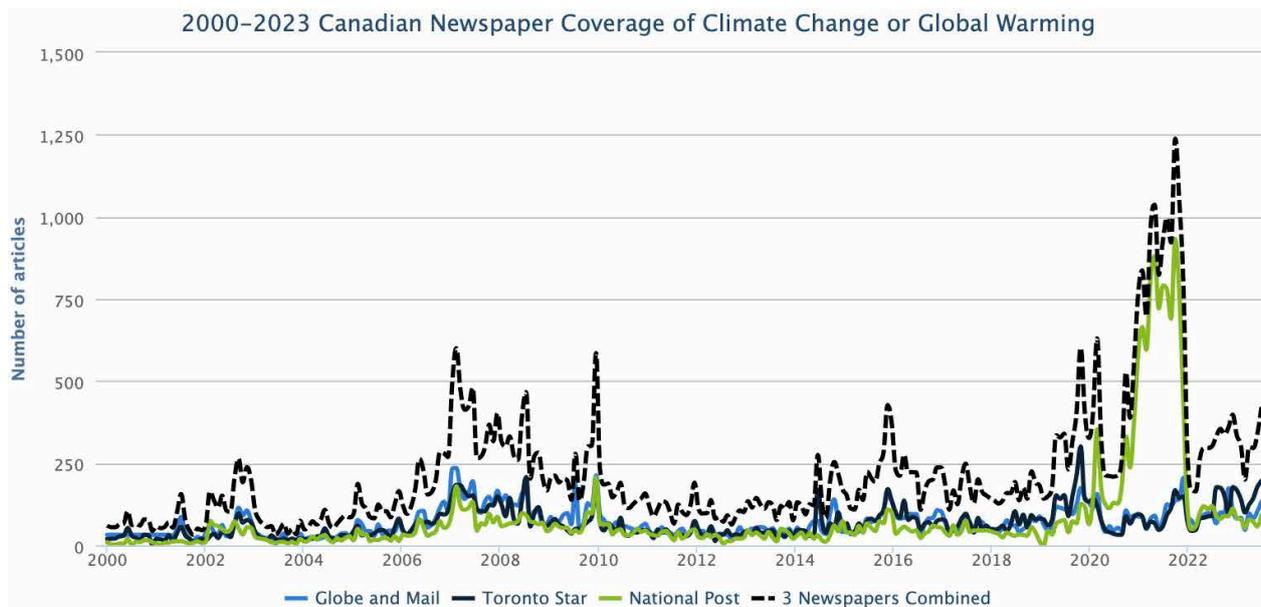


Figure 2. Newspaper coverage of climate change or global warming in Canadian newspapers *Globe and Mail*, *Toronto Star*, and *National Post* from January 2004 through June 2023.

on plastic pollution, but expressed concern that the petroleum industry and some governments would water down the eventual treaty. Most plastic is made from fossil fuels. Delegates at the Intergovernmental Negotiating Committee for Plastics agreed Friday evening to produce an initial draft before their next meeting in Kenya in November, participants said. The committee is charged with developing the first international, legally binding treaty on plastic pollution, on land and at sea. A coalition of “high-ambition”

governments led by Norway and Rwanda, along with environmental groups, want to end plastic pollution altogether by 2040 by slashing production and limiting some chemicals used in making plastics. “Projections suggest that a child born today will see plastic production double by the time they turn 18, but we know that the consequences of increasing plastic production will be disastrous for our health, the planet, and the climate,” said Dr. Tadesse Amera, who led the International Pollutants

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Elimination Network's delegation at the talks. "The stakes are high, but we are optimistic by the growing awareness among delegates of the need for global controls." Countries with big petroleum industries like the U.S., China and Saudi Arabia are focusing instead on plastic recycling, and want country-by-country rules instead of across-the-board limits". Meanwhile, **Times of India** journalist Vishwa Mohan noted, "as the world gears up to mark the 50<sup>th</sup> World Environment Day with a focus on solutions to plastic pollution, nearly 170 countries, including Indian, have agreed to prepare a draft text - called zero draft - of an international treaty by November to end plastic pollution through multiple measures in a time-bound manner".

In the first weeks of June, the United Nations (UN) held their annual climate negotiations in Bonn, Germany (SB58) as a mid-way point between the previous Conference of Parties meeting (COP27) in Egypt on the way to the next COP (28) in the United Arab Emirates. Discussions and reactions emanating from the meeting grabbed media coverage. For instance, UN Secretary-General António Guterres' sharp criticism of fossil fuel industry antics that delay and distract from concerted climate policy action earned attention. For example, **Associated Press** correspondent Frank Jordans reported, "The head of the United Nations launched a tirade against fossil fuel companies Thursday, accusing them of betraying future generations and undermining efforts to phase out a product he called "incompatible with human survival." Secretary-General António Guterres also dismissed suggestions by some oil executives – including the man tapped to chair this year's international climate talks in Dubai – that fossil fuel firms can keep up production if they find a way to capture planet-warming carbon emissions. He warned that this would just make them "more efficient planet-wreckers." It's not the first time the U.N. chief has called out Big Oil over its role in causing global warming, but the blunt attack reflects growing frustration at the industry's recent profit bonanza despite warnings from scientists that burning fossil fuels will push the world far beyond any safe climate threshold".

"The head of the United Nations launched a tirade against fossil fuel companies Thursday, accusing them of betraying future generations and undermining efforts to phase out a product he called "incompatible with human survival."



Patience Nabukalu and Greta Thunberg, attend a Fridays for Future protest in Bonn, Germany on June 12 against a planned oil pipeline in East Africa. The protest would see oil transported in a new 1443 kilometer long pipeline from Western Uganda through Tanzania to the Indian Ocean. Photo: Henning Kaiser/AP.

Other aspects of the UN meeting in Bonn also generated media stories. For example, **New York Times** journalist Max Bearak reported, "An unavoidable tension surrounds this year's United Nations-sponsored climate talks in November: They will take place in the oil-rich United Arab Emirates, and the most important role at the talks is held by the man who heads the national oil company. The executive, Sultan al-Jaber, and other representatives of the Emirates have argued that they have a "game changing" plan to fight climate change by welcoming oil and gas companies from around the world to participate more fully in the talks. In other words, invite the producers of the fuels that cause the majority of global warming as key players in developing a plan to slow the

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warming. In an interview, Majid al-Suwaidi, an Emirati diplomat who will also play a major role at the climate talks, known by the acronym COP28, said, “We need to engage the people who have the technical know-how, the skills, the technology – and, by the way, the people who provide jobs – in a conversation about how they transform.” To activists who have attended these conferences for years, that notion sounds far-fetched. “It’s just like how tobacco lobbyists need to be kept out of conversations about cancer prevention,” said Catherine Abreu, who heads Destination Zero, a network of nonprofits working on climate issues. The conference will take place amid a backdrop of resurgent fossil fuel investment after a brief, pandemic-era dip. Energy use derived from fossil fuels accounts for more than two-thirds of global emissions. Over the past year, the world’s biggest producers – places like the United States, Saudi Arabia, Norway and the Emirates – have approved dozens of vast new drilling projects. This month, the Emirates received long-sought permission from OPEC, the coalition of oil-producing nations that coordinates on output and prices, to pump more oil starting next year. ADNOC, the oil company Mr. al-Jaber heads, is investing billions in meeting those new targets”.

Shortly following the UN meeting SB58 in Bonn was a two-day summit in Paris that focused on restructuring financial arrangements in order to more capably serve frontline communities largely in countries of the Global South. For example, [Associated Press journalists Fatima Hussein and Paul Wiseman reported](#), “While restructuring debt and reducing poverty will be part of the summit Thursday and Friday, climate will be the main driver, with representatives from developing nations in Africa, Asia and elsewhere having a prominent seat at the table. The World Bank and IMF have been criticized for not factoring climate change into lending decisions and being dominated by wealthy countries like the U.S., with the neediest nations most at risk of global warming left out of calling the shots. While those are the primary problems to solve, some doubt the splashy summit led by French President Emmanuel Macron will

be able to take major strides to correct those challenges. Still, the Summit for a New Global Financing Pact will draw roughly 50 heads of state and government – from Germany, Brazil, Senegal, Zambia and more – with more than 100 countries represented. Barbados Prime Minister Mia Mottley will play a major role as a leader of the Bridgetown Initiative, a plan to reform development lending by freeing up money after climate disasters and targeting the higher borrowing costs and debt that developing nations face. U.S. Treasury Secretary Janet Yellen, Chinese Premier Li Qiang, new World Bank President Ajay Banga, IMF Managing Director Kristalina Georgieva, and climate activists Greta Thunberg and Vanessa Nakate also are set to attend. Masood Ahmed, president of the Center for Global Development think tank in Washington, isn’t expecting much concrete action from the gathering but a broad agreement that “we’ve got to think much bigger, much bolder. We need to be willing to change.” It’s been hard, however, to summon the political will to spend taxpayer money to combat climate change, said Ahmed, a former senior official in both the IMF and World Bank”.

Meanwhile, [Wall Street Journal correspondents Matthew Dalton and Andrew Duehren wrote](#), “The leaders of wealthy nations want private investors to send a flood of capital to poorer countries to lift them out of poverty and bankroll the response to climate change. Instead, those investor funds are drying up. Rising interest rates and financial stress have choked off finance to the world’s poorest countries, leaving them with debt burdens that are larger than they have been in nearly three decades. The market turmoil and the aftereffects of the global pandemic have pushed these countries deeper into poverty, reversing years of income gains and undermining their transition to cleaner energy, one of the rich world’s top development priorities. The gap between advanced economies and poor ones on wind and solar deployment is now so large that the Netherlands, one of the rainiest countries in Europe, generates more solar electricity than all of sub-Saharan Africa, according to

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the International Energy Agency". Furthermore, [La Vanguardia journalist Eusebio Val wrote](#), "Paris aspires to become a planetary benchmark for ecological transformation and adaptation to global warming. That is why its municipal council approved an ambitious project on June 5, the "local bioclimatic urban plan", a detailed roadmap for the next twenty years (...) The French capital, in fact, has been with a philosophy for 15 years clear – although not always to the taste of the neighbors– of marginalization of the private car, promotion of the bicycle and aggressive vegetation (...) The 2024 Olympic Games want to be the greenest and a showcase for the bicycle (...) In 1885, little Before the Eiffel Tower was erected, the average temperature in Paris was 10.7°C. In 2010 it had already risen to 13°C. It is estimated that in 2085 it can reach 14.5°C. Experts think that there will be heat peaks of 50°C, a temperature typical today of the deserts of Arizona or -Arabia".

Also in June, the European Scientific Advisory Council of the European Commission presented proposals to reduce greenhouse gas emissions by between 90% and 95% by the year 2040 compared to 1990 and this earned media attention. For example, [an editorial in La Vanguardia noted](#), "The succession of tests, extreme episodes and meteorological index records have prevailed and there are few voices or social groups that downplay the situation. The years of passivity by administrations and the private sector are behind us (...) An essential recommendation is the drastic reduction of coal, natural gas and oil - the so-called fossil fuels - in favor of wind and solar energy (...) the European Scientific Advisory Council sets 2040 as the deadline for the decarbonisation of the electricity sector. It is a race against the clock that requires a firm and resolute commitment to public policies. And the population understands this need for extraordinary measures against global warming".

"Despite rising awareness about global climate change and its devastating impacts, carbon dioxide levels keep treading [sic] in the wrong direction. This year's annual increase of CO<sub>2</sub> levels is one of the largest on record, representing an accumulation of the heat-trapped gases **"not seen for millions of years"**."



A Chinese state-owned coal-fired power plant is seen near a large floating solar farm project under construction in Huainan, Anhui province, China. Photo: Kevin Frayer/Getty Images.

In June, media attention to climate change or global warming contained several [ecological](#) and [meteorological](#) themed-stories as well. For instance, an appraisal of Carbon Dioxide (CO<sub>2</sub>) concentrations in the Earth's atmosphere by the National Oceanic and Atmospheric Administration (NOAA) and the Scripps Institute of Oceanography earned media coverage. For example, [Washington Post reporter Amudalat Ajasa wrote](#), "despite rising awareness about global climate change and its devastating impacts, carbon dioxide levels keep treading [sic] in the wrong direction. This year's annual increase of CO<sub>2</sub> levels is one of the largest on record, representing an accumulation of the heat-trapped gases "not seen for millions of years," scientists from the Scripps Institution of Oceanography and the National Oceanic and Atmospheric Administration said Monday. The current amount of carbon dioxide in the

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atmosphere is now 50 percent higher than it was before the industrial era, the NOAA and Scripps scientists said in a report. The new figures offer more evidence that global climate efforts – including transitioning from fossil fuels to cleaner energy – are falling short of what scientists say is needed to stem the warming of the planet”.

As June unfolded, ongoing Canadian wildfires and smoke drifting into the US garnered considerable media portrayals. For example, [ABC News correspondents Ginger Zee, Stephanie Ebbs, Max Golebo, Kenton Gewecke, and Daniel Manzo reported](#), “Wildfires burning in Canada have prompted hazardous air pollution conditions in the U.S. this week, as smoke moves South and lingers over much of the Northeast. While wildfires in California and other western states have prompted air quality warnings in the past, seeing them on the other side of the country has prompted questions about how much of a role climate change is playing in the event”. Meanwhile, [Guardian journalist Dharna Noor noted](#), “Canada’s ongoing wildfire season is a harbinger of our climate future, experts and officials say. The fires are a “really clear sign of climate change”, said Mohammadreza Alizadeh, a researcher at McGill University in Montreal, who is also a postdoctoral associate at the Massachusetts Institute of Technology. Research shows that climate change has already exacerbated wildfires dramatically. A 2021 study supported by the National Oceanic and Atmospheric Association found that climate change has been the main driver of the increase in hot, dry fire weather in the western US. By 2090, global wildfires are expected to increase in intensity by up to 57% thanks to climate change, a United Nations report warned last year. Canada is on track to experience its most severe wildfire season on record, national officials said this week. It’s part of a trend experts say will intensify as climate change makes hotter, drier weather and longer fire seasons more common. The country has already seen 1,400% of the normal amount of land burned for this time of year. More than 400 blazes were burning across Canada on Wednesday, following an unprecedentedly intense beginning to the fire

season. Hot and dry conditions are expected to persist through to the end of the season. Scientists have not linked this summer’s fires to climate change, but experts and officials say global warming will exacerbate Canadian wildfires in general. By the end of the century, climate change could double the acreage burned by wildfires each year, according to Canada’s natural resources agency. That could take a heavy toll on human safety, ecosystems and air quality, while threatening timber supply”.

Such coverage intersected with other extreme events happening in June. For example, [New York Times journalists Raymond Zhong and Delger Erdenesanaa reported](#), “Between the dangerous heat baking Texas and the Southeast, and the wildfire smoke filling the skies throughout the Upper Midwest and into the Mid-Atlantic, people across a huge part of the United States have been seeking relief from the outside world in recent days. The two threats this week aren’t connected directly. But a common factor is adding to their capacity to cause misery. Human-caused climate change is turning high temperatures that would once have been considered improbable into more commonplace occurrences. And it is intensifying the heat and dryness that fuel catastrophic wildfires, allowing them to burn longer and more ferociously, and to churn out more smoke. Climate change is “the elephant in the room” that is worsening wildfires and their effects on air quality, said John C. Lin, a professor of atmospheric science at the University of Utah. As this year’s Canadian blazes have shown, climate-related disasters are becoming international affairs, not just local or regional ones, Dr. Lin said. The weather has always been a combination of mild norms and occasional extremes, but the burning of fossil fuels is loading the dice in favor of weather on the warmer end. On Wednesday afternoon, more than 50 million Americans were living under heat advisories from the National Weather Service. Almost all of Southern and Western Texas’ hottest seven-day periods have occurred in the past few decades, he said, a sign of how global warming is making heat waves like those

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that are familiar to Texans in summertime hotter than they would be otherwise". Meanwhile, **Associated Press correspondents Corey Williams and Mike Householder noted**, "Smoky air from Canada's wildfires shrouded broad swaths of the U.S. from Minnesota to New York and Kentucky on Wednesday, prompting warnings to stay inside and exacerbating health risks for people already suffering from industrial pollution. The impacts are particularly hard on poor and minority communities that are more likely to live near polluting plants and have higher rates of asthma. Detroit, a mostly Black city with a poverty rate of about 30%, had some of the worst air quality in the U.S. on Wednesday, prompting the Environmental Protection Agency to warn that "everyone should stay indoors."... In Chicago, where about 29% of the population is Black, Juneor Brandon Johnson urged young people, older adults and residents with health issues to spend more time indoors. He pledged "swift action to ensure that vulnerable individuals have the resources they need to protect themselves and their families." President Joe Biden visited the nation's third-largest city on Wednesday to promote his renewable energy policies. Biden has described the Canadian wildfires as clear evidence of climate change".

These extreme events contributed to several stories that widened the aperture of considerations of how these episodes are fueled by human-induced climate change. For example, **CNN journalist Rachel Ramirez reported**, "Droughts, storms, wildfires and heat waves: Extreme weather around the world is becoming more intense and more frequent. The toll is huge and mounting, with lives lost, homes destroyed, livelihoods stolen and economies upended. The extreme events are happening against the backdrop of a very fast-warming climate. The world is already 1.2 degrees Celsius warmer than it was in preindustrial times, and the next five years are predicted to be the hottest on record. People often want to know if an extreme weather event happened because of climate change, said Friederike Otto, climate scientist and co-lead of the World Weather Attribution initiative. But it is not a simple

"Smoky air from Canada's wildfires shrouded broad swaths of the U.S. from Minnesota to New York and Kentucky, prompting warnings to stay inside and exacerbating health risks for people already suffering from industrial pollution. The impacts are particularly hard on poor and minority communities that are more likely to live near polluting plants and have higher rates of asthma."



A veil of haze from Canadian wildfires obscuring the majestic Chicago skyline, as seen from the city's Bronzeville neighborhood on June 27. Photo: Charles Rex Arbogast/AP.

question. "You can't answer this with yes or no," she told journalists at a briefing last week. It is because climate change alters the likelihood and intensity of extreme events, she said. Otto and other scientists are using a scientific technique to transform our understanding of how this dynamic plays out. And, more often than not, they are finding the clear fingerprints of climate change on extreme weather events. Called "attribution," the method involves analyzing real world observations as well as climate models to establish whether a particular extreme event could have happened in a world without global heating. While attribution studies are not done for every extreme weather event, they help bring home the realities of the direct and

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immediate damage the climate crisis is doing to people's lives, which scientists say will only get worse if the world continues to pump out planet-warming pollution. "We're always going to have extreme weather, but if we keep driving in this direction, we're gonna have a lot of extreme weather," said Ted Scambos, a glaciologist at the University of Colorado-Boulder. From intense heat and record-breaking drought, to severe storms fueled by hotter air and oceans, here are 10 disasters showing the devastating impacts of the human-caused climate crisis".

Other parts of the planet also faced ecological and meteorological-themed climate challenges in June. For instance, heat in the Middle East - centered in southeast Iran - earned media representations. For example, [New York Times journalists Vivian Yee and Leily Nikounazar reported](#), "Summer has come to Sistan and Baluchistan province, an impoverished fragment of chapped earth and shimmering heat in Iran's southeast corner, and all people there can talk about is how to get water. For weeks now, taps in cities like Zahedan have yielded nothing but a salty, weakening trickle. In the villages that water pipes have never reached, the few residents who remain say people can barely find enough water to do the laundry or bathe themselves, let alone fish, farm or sustain livestock. "Sometimes, just to wash the dishes, we have to wait for so long," said Setareh, 27, a university student in Zahedan, the provincial capital. "Everything from cooking to other chores is an ordeal for us." Drought has stalked Iran for centuries, but the threat intensified in recent years as political priorities trumped sound water management, experts say. Climate change has only made things worse in an area that typically gets no rainfall for seven months out of the year, and where temperatures can soar to 124 degrees in July... Iranian groundwater and wetlands are irreversibly depleted, water experts say. Because of climate change, Iran can expect hotter temperatures and longer dry spells, as well as a greater risk of destructive floods. Yet the country continues to spend precious water on agriculture, which does little to expand the economy but keeps people working in rural

Iran, where many government supporters live. It is also developing already-thirsty areas that will only demand more water".

Meanwhile, in India and Pakistan, Cyclone Biparjoy's landfall generated media stories with ties to a changing climate. For example, [BBC journalists Arunoday Mukharji in Mandvi and Meryl Sebastian in Kochi reported](#), "A number of train services have been suspended in Gujarat, while the ports of Kandla and Mundra - two of India's largest - have stopped operations, authorities said. Fishing has been suspended along the Gujarat coast, while fishermen in Pakistan's coastal region have also been warned to stay ashore. The Gujarat government has also set up control rooms to monitor the safety of Asiatic lions in the Gir forest and coastal areas, BBC Gujarati reported. The Gir forest is the only natural habitat of the Asiatic lion. Eighteen national disaster relief teams and 12 state disaster relief teams have been deployed in key areas of Gujarat for relief work. They will focus on ensuring that essential services remain unaffected or at least restored soon, depending on how strong the cyclone is. The India Meteorological Department expects Biparjoy to "fall in intensity" as it moves inland. Cyclones, also known as hurricanes in the North Atlantic and typhoons in the north-west Pacific, are a regular and deadly phenomenon in the Indian Ocean. Rising surface temperatures across the Arabian Sea in recent years due to climate change have made the surrounding regions even more vulnerable to devastating storms".

Also, a heat wave in northern India grabbed several journalists' and editors' attention. For example, [Associated Press correspondents Rajesh Kumar Singh, Piyush Nagpal and Sibi Arasu reported](#), "A scorching heat wave in two of India's most populous states has overwhelmed hospitals, filled a morgue to capacity and disrupted power, forcing staff to use books to cool patients, as officials investigate a death toll that has reached nearly 170. In the northern state of Uttar Pradesh, 119 people have died from heat-related illnesses over the last several

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Figure 3. Examples of newspaper front pages with climate change stories in June.

days while neighboring Bihar state reported 47 fatalities, according to local news reports and health officials. “So many people are dying from the heat that we are not getting a minute’s time to rest. On Sunday, I carried 26 dead bodies,” Jitendra Kumar Yadav, a hearse driver in Deoria town, 110 kilometers (68 miles) from Ballia, told The Associated Press. Other residents said they were scared of going outside after midmorning...Climate experts say that heat waves will continue and India needs to prepare better to deal with their consequences. A study by World Weather Attribution, an academic group that examines the source of extreme heat, found that a searing heat wave in May that struck parts of South Asia was made at least 30 times more likely by climate change”.

In June, many *cultural* stories relating to climate change or global warming were also detected. To illustrate, workers at Amazon walked out in early June again protesting the company’s failure to substantially address climate goals. For example, *ABC News correspondent Max Zahn reported*, “Nearly 2,000 Amazon workers plan to walk out on Wednesday as the company weathers layoffs and a mandate that corporate employees return to the office. “Employees need a say in decisions that affect our lives,” said a petition from worker groups Amazon Employees for Climate Justice and Amazon’s Remote Advocacy. After the walkout, Amazon told ABC News the company estimates 300 workers participated in the protest. The employee activism follows a series of layoffs

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in recent months. In early January, Amazon announced plans to eliminate just over 18,000 roles, including impending layoffs announced in November. In all, the company has slashed 27,000 jobs since last fall. At the outset of this month the company mandated corporate employees return to the office at least three days per week. The employee petition cited the return-to-work policy and Amazon's ongoing climate impact as evidence that company leadership is 'taking us in the wrong direction.'

Meanwhile, in June there was further fallout in relation to the promises not kept regarding carbon neutrality in the 2022 Men's World Cup in Qatar. For example, *Independent reporter John Revill wrote*, "Football's world governing body FIFA made false and misleading statements about the reduced environmental impact of the 2022 World Cup in Qatar, a Swiss regulator said on Wednesday. The Swiss Fairness Commission, the self-regulatory body of the advertising and communications industry, made its determination after investigating five claims that Zurich-based FIFA marketed the tournament as being carbon neutral. The commission, which issues recommendations, but no state-enforceable judgements, advised FIFA from making unsubstantiated claims in future. It said complainants usually implement its recommendations voluntarily. FIFA did not respond to a request for comment. Complainants from Switzerland, France, Belgium, the UK and the Netherlands said FIFA made false statements in its communications about carbon neutrality at the World Cup, the commission said... Raphael Mahaim, from the group Lawyers for the Climate, said he was delighted with the ruling which he said exposed FIFA's greenwashing. "FIFA said it was taking the climate change seriously, and taking the credit for this, and this wasn't true," he said".

Finally, several *scientific* findings and developments sparked media stories during the month of June. Among them, in early June an Earth Commission *study in the journal Nature* entitled 'Safe and Just Earth System Boundaries' garnered significant media

attention. For example, *Associated Press journalist Seth Borenstein reported*, "Earth has pushed past seven out of eight scientifically established safety limits and into "the danger zone," not just for an overheating planet that's losing its natural areas, but for the well-being of people living on it, according to a new study. The study looks not just at guardrails for the planetary ecosystem but for the first time it includes measures of "justice," which is mostly about preventing harm for countries, ethnicities and genders. The study by the international scientist group Earth Commission published in Wednesday's journal *Nature* looks at climate, air pollution, phosphorus and nitrogen contamination of water from fertilizer overuse, groundwater supplies, fresh surface water, the unbuilt natural environment and the overall natural and human-built environment. Only air pollution wasn't quite at the danger point globally. The study found "hotspots" of problem areas throughout Eastern Europe, South Asia, the Middle East, Southeast Asia, parts of Africa and much of Brazil, Mexico, China and some of the U.S. West – much of it from climate change. About two-thirds of Earth don't meet the criteria for freshwater safety, scientists said as an example. "We are in a danger zone for most of the Earth system boundaries," said study co-author Kristie Ebi, a professor of climate and public health at the University of Washington. If planet Earth just got an annual checkup, similar to a person's physical, "our doctor would say that the Earth is really quite sick right now and it is sick in terms of many different areas or systems and this sickness is also affecting the people living on Earth," Earth Commission co-chair Joyeeta Gupta, a professor of environment at the University of Amsterdam, said at a press conference."

Moving further into the month of June, an International Energy Agency (IEA) *report* got attention in several stories. For example, *Wall Street Journal correspondent Will Horner reported*, "Rising demand for crude oil is set to slow to a trickle within five years and peak before the end of the decade, as electric-vehicle uptake surges and developed nations

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rapidly transition to cleaner sources of energy, according to a prominent energy forecaster. The International Energy Agency, a group funded by some of the world's largest oil consumers, expects demand for transport fuels derived from oil such as gasoline will be the first to peak before starting a steady decline—hastened by a sharp uptick in EVs and a long-lasting shift to remote working spurred on by the Covid-19 pandemic. Rapidly growing Asian economies will continue to prop up the global appetite for oil in the coming years, and demand for jet fuel, naphtha and other oil products with industrial uses will continue to tick higher, the IEA said in a report released Wednesday. But even in China, which has long been the powerhouse of global oil demand, the appetite for crude will slow markedly before the end of the decade. India will surpass China as the main driver of oil growth as soon as 2027, the IEA said. The forecast, which the IEA made in an annual report that considers oil demand as far away as 2028, isn't the first time the Paris-based group has laid out a [timeline predicting a zenith for oil](#). But it envisages a far more rapid shift away from fossil fuels than previously expected—a shift that has been sharply accelerated by the Covid-19 pandemic and the energy crisis that followed Russia's invasion of Ukraine. "The shift to a clean-energy economy is picking up pace, with a peak in global oil demand in sight before the end of this decade," said Fatih Birol, the IEA's executive director. The forecasts are based on sharply diverging energy trends between the developed economies of North America and Europe and rapidly growing developing nations, predominantly those in Asia. Demand for oil in the advanced economies that make up the Organization for Economic Cooperation and Development is likely to peak as soon as this year thanks to vast government spending aimed at reconfiguring economies away from fossil fuels, the IEA said. Demand from those economies is expected to decline to 44.3 million barrels a day by 2028 from its peak of 46.2 million barrels a day in 2023. Demand in

non-OECD nations will climb by more than 7% between now and 2028, to 61.4 million barrels a day. The oil-market outlook appears sharply different in the near term as Asian economies ramp up demand following the easing of pandemic-era lockdown measures and major producers constrain output... Some of the IEA's forecasts have missed the mark in the past. Its prediction that Russian output would be sharply harmed by sanctions following the war in Ukraine has largely not been borne out. It has also called for no new investments in fossil fuels to meet climate targets, a call criticized by the oil-and-gas industry as unrealistic. It isn't the only group that foresees waning demand for oil, however. OPEC has also laid out longer-term forecasts that see oil demand peaking in wealthier nations this decade but remaining more robust in the rest of the world for longer. In October, the IEA had put a timeline for peak oil demand further out, predicting it would happen in the 2030s".

Also in June, a report on the State of the Climate in Europe in 2022 – produced jointly by the World Meteorological Organization (WMO) and the Copernicus Climate Change Service of the European Union – indicated that the European region warmed by 2.3°C, twice the world average. This report earned media attention. For example, [La Vanguardia journalist Antonio Cerrillo wrote](#), "The heat waves would have caused an excess of more than 16,000 deaths (...) The old continent recorded the hottest summer in history in 2022, confirms this new summary. In addition, several countries, including Belgium, Germany, Spain, France, Ireland, Italy, Luxembourg, Portugal, the United Kingdom and Switzerland, experienced the warmest year in their history (...) "The high temperatures exacerbated the serious and widespread conditions of drought, fueled violent wildfires that left the second largest area burned on record, and caused thousands of excess heat-related deaths," said WMO Secretary-General Petteri Taalas".

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JULY

“A foretaste of the future”



Sunrise from Miami Beach this month. Photo: Joe Raedle/Getty Images.



Media coverage of climate change or global warming in newspapers around the globe **increased 14%** from June 2023 and was also **2% higher** than July 2022 levels.

July media coverage of climate change or global warming in newspapers around the globe increased 14% from June 2023 and was also 2% higher than July 2022 levels. Figure 1 shows trends in newspaper media coverage at the global scale - organized into seven geographical regions around the world - from January 2004 through July 2023. International wire services increased 19% from June 2023 (see Figure 2). Compared to the previous month, coverage surprisingly dipped in North America (-2%) but increased in all other regions that we monitor as part of the Media and Climate Change Observatory (MeCCO): in Asia (+1%), Africa (+2%), Latin America (+8%), Oceania (+12%), the European Union (EU) (+31%), and especially in the Middle East (+115%).

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, United States (US) print coverage increased 17%

while Canadian print coverage went up 25% (see Figure 2) in June 2023 from the previous month. Coverage was up on the US and Canada respectively 11% and 12% in June 2023 from the previous year of June 2022.

To begin, in July abundant media attention was paid to *ecological* and *meteorological* themed-stories about climate change or global warming. For instance, news about heat and flooding were most apparent. For example, to start the month *Washington Post* journalist **Scott Dance reported**, “A remarkable spate of historic heat is hitting the planet, raising alarm over looming extreme weather dangers – and an increasing likelihood this year will be Earth’s warmest on record. New precedents have been set in recent weeks and months, surprising some scientists with their swift evolution: Historically warm oceans, with North Atlantic temperatures already nearing their typical annual peak; unparalleled low sea ice

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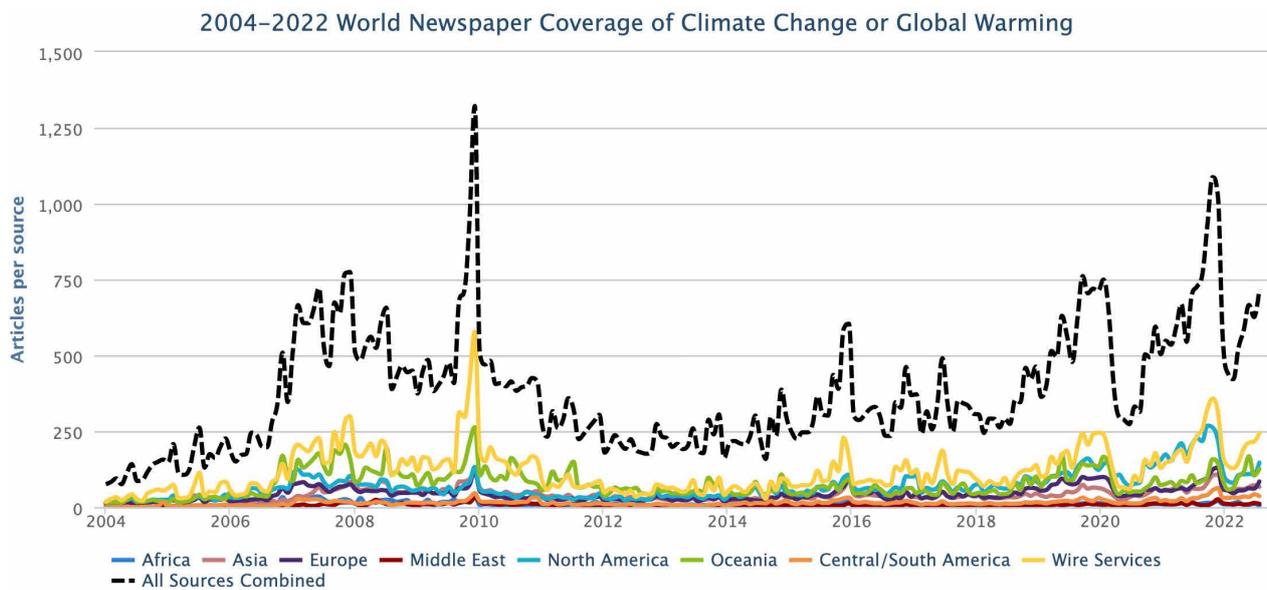


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through July 2023.

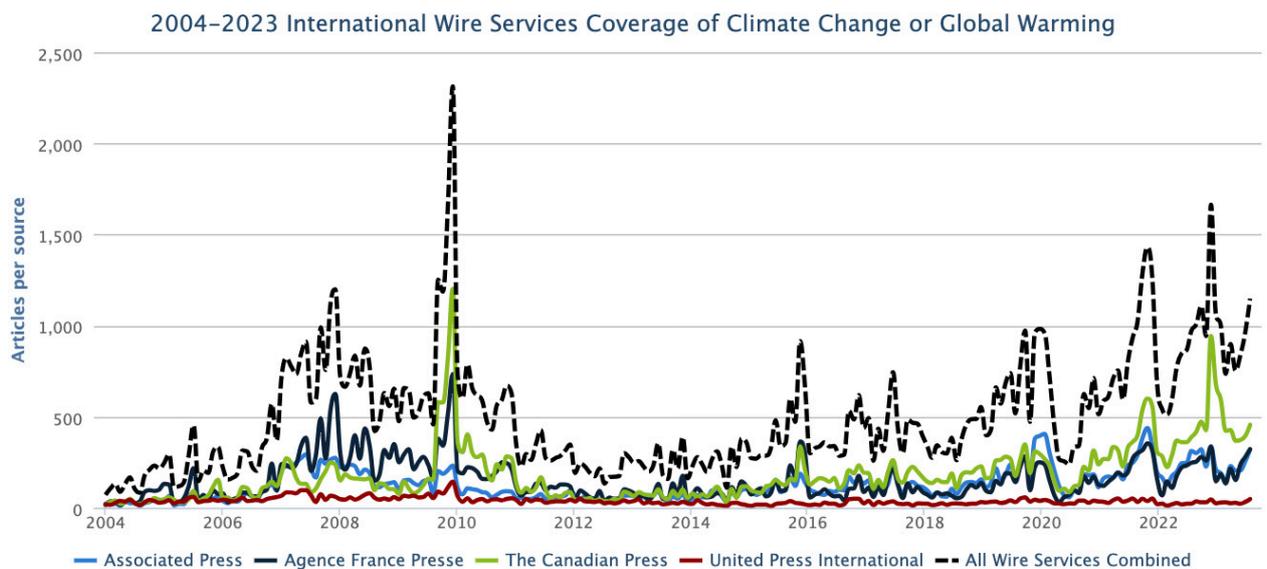


Figure 2. Media coverage of climate change or global warming in international wire services *The Associated Press* (AP), *Agence France Presse* (AFP), *The Canadian Press*, and *United Press International* (UPI) from January 2004 through July 2023.

levels around Antarctica, where global warming impacts had, until now, been slower to appear; and the planet experiencing its warmest June ever charted, according to new data”.

Meanwhile, on July 5th [Associated Press correspondents Seth Borenstein and Isabella O’Malley noted](#), “Earth’s average temperature on Wednesday remained at an unofficial record high set the day before, the latest grim milestone in a week that has seen a series of climate-change-driven extremes. The average

global temperature was 17.18 Celsius (62.9 degrees Fahrenheit), according to the University of Maine’s Climate Reanalyzer, a tool that uses satellite data and computer simulations to measure the world’s condition. That matched a record set Tuesday, and came after a previous record of 17.01 Celsius (62.6 degrees Fahrenheit) was set Monday”.

Reflections from the high temperatures in first week of July earned further media coverage. For example, [The Guardian staff](#)

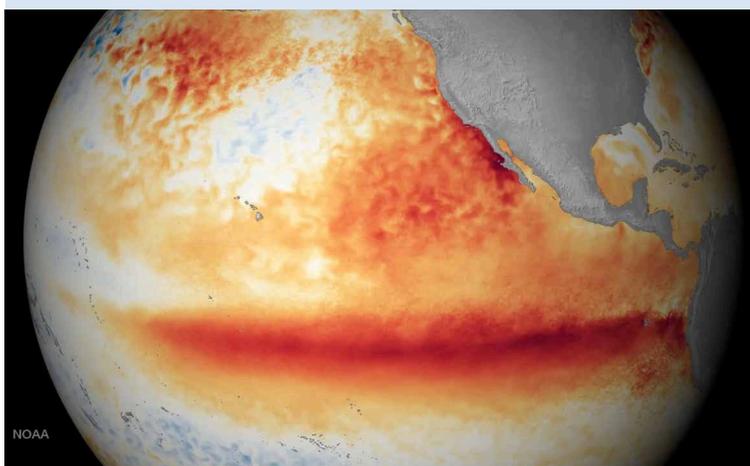
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**noted**, “The UN secretary general has said that “climate change is out of control”, as an unofficial analysis of data showed that average world temperatures in the seven days to Wednesday were the hottest week on record. “If we persist in delaying key measures that are needed, I think we are moving into a catastrophic situation, as the last two records in temperature demonstrates,” António Guterres said, referring to the world temperature records broken on Monday and Tuesday. The average global air temperature was 17.18C (62.9F) on Tuesday, according to data collated by the US National Centers for Environmental Prediction (NCEP), surpassing the record 17.01C reached on Monday. For the seven-day period ending Wednesday, the daily average temperature was .04C (.08F) higher than any week in 44 years of record-keeping, according to the University of Maine’s Climate Reanalyzer data. That metric showed that Earth’s average temperature on Wednesday remained at the record high of 17.18C. Climate Reanalyzer uses data from the NCEP climate forecast system to provide a time series of daily mean two-metre air temperature, based on readings from surface, air balloon and satellite observations”.

Taking a broader look **CNN correspondent Helen Regan reported**, “Governments must prepare for more extreme weather events and record temperatures in the coming months, the World Meteorological Organization warned Tuesday, as it declared the onset of the warming phenomenon El Niño. El Niño is a natural climate pattern in the tropical Pacific Ocean that brings warmer-than-average sea-surface temperatures and has a major influence on weather across the globe, affecting billions of people. “The onset of El Niño will greatly increase the likelihood of breaking temperature records and triggering more extreme heat in many parts of the world and in the ocean,” said WMO Secretary-General Petteri Taalas. The declaration “is the signal to governments around the world to mobilize

“The first El Niño to develop in seven years layered on top of human-caused global heating, could push 2023 or 2024 to **break 2016’s heat record.**”



During the last major El Niño event in October 2015, above-average sea surface temperatures were found in places shown in orange and red. Image: NOAA.

preparations to limit the impacts on our health, our ecosystems and our economies.” To save lives and livelihoods, governments must establish early warning systems and prepare for further disruptive weather events this year, he said. The last three years have been some of the warmest on record, even with El Niño’s sister phase, La Niña - which is marked by cooler-than-average ocean temperatures. A “double whammy” of a very strong El Niño and human-caused warming from the burning of fossil fuels led to 2016 becoming the hottest year on record, according to the WMO, the United Nations’ agency for weather, climate and water resources. But the first El Niño to develop in seven years layered on top of human-caused global heating, could push 2023 or 2024 to break 2016’s heat record, the WMO said. The WMO said there was a 90% probability of El Niño continuing during the second half of 2023 at moderate strength. Along with increased ocean warming, El Niño events are usually associated with increased rainfall in parts of southern South America, the southern United States, the Horn of Africa and central Asia.

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But it can also amplify severe droughts, heat waves and wildfires over Australia, Indonesia, parts of southern Asia, Central America and northern South America. Other impacts include dangerous tropical cyclones in the Pacific and the mass bleaching of fragile coral reefs. In India, a major rice producing nation, El Niño can weaken the monsoon that brings the rainfall the country relies on to fill aquifers and grow crops. El Niño this year could also dent US economic growth, potentially impacting everything from food prices to winter clothing sales, a recent study found. The study attributed \$5.7 trillion in global income losses to the 1997-98 El Niño and \$4.1 trillion in losses to the 1982-83 El Niño. The world could also be temporarily pushed past 1.5 degrees Celsius of warming above pre-industrial levels – a key tipping point beyond which the chances of extreme flooding, drought, wildfires and food shortages could increase dramatically”.

In Asia, inundations of rain and consequent flooding – with links made to a changing climate – pervaded July news stories. For example, *Times of India* journalist **Nishant Saxena reported**, “Climate change is no longer a distant threat lurking in the future. It is here, it is real, and it is staring us in the face. As extreme weather events become the new normal, it is high time we acknowledge the urgency of the situation and take immediate action to mitigate the catastrophic consequences. The recent monsoon fury in India, with its unprecedented rainfall, flash floods, and landslides, serves as a grim reminder of the impact of climate change on our lives. The scientific community has been sounding the alarm for years, and now the evidence is undeniable. Rising temperatures, erratic rainfall patterns, and increased frequency of extreme weather events are all consequences of global warming. The very fabric of our environment is unraveling before our eyes, and it is our responsibility to act. Meteorologists and climate scientists attribute the current spell of heavy rains to a combination of factors, including the alignment of weather systems and changes in monsoon patterns”. Furthermore, *Associated Press*

**correspondents Isabella O’ Malley, Brittany Peterson and Drew Costley noted**, “Although destructive flooding in India, Japan, China, Turkey and the United States might seem like distant events, atmospheric scientists say they have this in common: Storms are forming in a warmer atmosphere, making extreme rainfall a more frequent reality now. The additional warming that scientists predict is coming will only make it worse. That’s because a warmer atmosphere holds more moisture, which results in storms dumping more precipitation that can have deadly outcomes. Pollutants, especially carbon dioxide and methane, are heating up the atmosphere. Instead of allowing heat to radiate away from Earth into space, they hold onto it. While climate change is not the cause of storms unleashing the rainfall, these storms are forming in an atmosphere that is becoming warmer and wetter”.

Moving from atmospheric concerns, there were ample news stories of ocean warming and climate change or global warming in July. For example, *New York Times* journalists **Catrin Einhorn and Elena Shao reported**, “Florida’s coral reefs are facing what could be an unprecedented threat from a marine heat wave that is warming the Gulf of Mexico, pushing water temperatures into the 90s Fahrenheit. The biggest concern for coral isn’t just the current sea surface temperatures in the Florida Keys, even though they are the hottest on record. The daily average surface temperature off the Keys on Monday was just over 90 degrees Fahrenheit, or 32.4 Celsius, according to the National Oceanic and Atmospheric Administration. The real worry, scientists say, is that it’s only July. Corals typically experience the most heat stress in August and September. “We’re entering uncharted territories,” Derek Manzello, an ecologist and the coordinator of NOAA’s Coral Reef Watch program, said. Coral reefs are natural wonders that support myriad species and blunt damage from storms. In the United States, reefs generate economic benefits to the tune of \$3.4 billion annually for fisheries, tourism and coastal protection, according to NOAA. But oceans have absorbed some 90 percent of the

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additional heat caused by humans as we burn fossil fuels and destroy forests. When sea temperatures rise too high, corals bleach, expelling the algae they need for sustenance. If waters don't cool quickly enough, or if bleaching events happen in close succession, the corals die. For decades, scientists have been warning that climate change is an existential threat to coral reefs. Already, the world has lost a huge proportion of its coral reefs, perhaps half since 1950".

As the month continued to unfold, record-breaking temperatures across the globe continued to earn media attention. For example, in North America [Washington Post journalist Janice Kai Chen reported](#), "A coast-to-coast heat dome has caused record-breaking temperatures in places like Las Vegas and Death Valley, but the persistence of these temperatures makes this period of extreme heat particularly notable. The southern United States has seen some locations with more than two weeks of 100-plus-degree maximum temperatures, with record-breaking streaks in Roswell, N.M., and Midland, Tex. The median duration of a record-breaking streak in 2023 – 14 days – is the longest in almost 90 years. This year has seen more than 90 days with maximum temperatures exceeding 100 degrees at weather stations across the continental United States, with ongoing streaks expected to continue into next week. The heat wave adds to extreme weather events across the globe that are expected to intensify in coming years due to worsening climate change". As another example, in Europe [Guardian journalist Angela Giuffrida reported](#), "A fierce anticyclone named after Cerberus, a three-headed monster-dog that features in Dante's Inferno, had not even ended before Italians were warned that a more intense one called Caronte, or Charon, who in Greek mythology was the ferryman of the dead,

"Punishing heat waves gripped three continents, breaking records in cities around the Northern Hemisphere less than two weeks after the Earth recorded what scientists said were likely its **hottest days in modern history.**"



A helicopter crew fights fires in Mandra, Greece, west of Athens. Photo: Petros Giannakouris/Associated Press.

was on its way. Italy sweltered in temperatures reaching highs of 38C over the weekend, while Caronte will grip the country from Monday, sending the mercury beyond 40C in central and southern regions, with the islands of Sicily and Sardinia possibly hitting a peak of 48C. Italians are used to hot summers. But not this hot, especially as the consecutive heatwaves struck abruptly, and followed a spring and early summer marked by storms, flooding and below average temperatures".

A third example made links between North America, Europe and Asia together. On July 18 [New York Times journalist Alan Huhás wrote](#), "Punishing heat waves gripped three continents on Tuesday, breaking records in cities around the Northern Hemisphere less than two weeks after the Earth recorded what scientists said were likely its hottest days in modern history.

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Firefighters in Greece scrambled to put out wildfires, as parched conditions raised the risk of more blazes throughout Europe. Beijing logged another day of 95-degree heat, and people in Hangzhou, another Chinese city, compared the choking conditions to a sauna. From the Middle East to the American Southwest, delivery drivers, airport workers and construction crews labored under blistering skies. Those who could stay indoors did. The temperatures, afflicting so much of the world all at once, were a withering reminder that climate change is a global crisis, driven by human-made forces: the emissions of heat-trapping gases, mainly caused by the burning of fossil fuels”.

As the month drew to a close, several stories took stock of the record-breaking month of heat in the face of climate change and global warming. For example, on July 20 [New York Times reporter Delger Erdenesanaa noted](#), “Last month was the planet’s warmest June since global temperature record-keeping began in 1850, the National Oceanic and Atmospheric Administration said in its monthly climate update on Thursday. The agency also predicts unusually hot temperatures will occur in most of the United States, almost everywhere except the northern Great Plains, during August. The first two weeks of July were also likely the Earth’s warmest on human record, for any time of year, according to the European Union’s Copernicus Climate Change Service”. Meanwhile, on July 20 [Guardian journalist Dharna Noor wrote](#), “July will likely be Earth’s hottest month in hundreds if not thousands of years, Gavin Schmidt, the director of Nasa’s Goddard Institute for Space Studies, told reporters on Thursday, as a persistent heatwave baked swaths of the US south. Schmidt made the announcement during a meeting at Nasa’s Washington headquarters that convened agency climate experts and other leaders, including Nasa administrator Bill Nelson and chief scientist and senior climate adviser Kate Calvin. The meeting came during a summer that has put the climate crisis on full display. Deadly floods have struck New England. Canadian wildfire smoke has choked US cities. And tens of millions of people have been placed

under heat advisories, with areas across the US south and west breaking temperature records. “We are seeing unprecedented changes all over the world,” Schmidt said. Though the changes may feel shocking, they are “not a surprise” to scientists, he added. “There has been a decade-on-decade increase in temperatures throughout the last four decades.” Earth saw its hottest June on record, according to Nasa’s global temperature analysis, the agency announced last week”.

Focusing on warming oceans, on July 26 [New York Times journalist Hiroko Tabuchi reported](#), “The reading from a buoy off Florida this week was stunning: 101.1 degrees Fahrenheit, or just over 38 Celsius, a possible world record for sea surface temperatures and a stark indication of the brutal marine heat wave that’s threatening the region’s sea life. But determining whether that reading was in fact a world record is complicated. First things first: The buoy’s reading is so off-the-charts, could it have been malfunctioning? Allyson Gantt of the National Park Service, which monitors and maintains the buoy, said there was no reason to doubt the measurement. The data was consistent with high water temperatures seen in the area, Florida Bay, between the southern end of the Florida mainland and the Florida Keys, in recent weeks, she said. Then, there’s the fact that there is no official keeper of ocean temperature records. The World Meteorological Organization tracks land surface temperature records, but not ones set at sea. Experts have pointed to a reading of 99.7 degrees Fahrenheit, recorded in the middle of Kuwait Bay in 2020 and reported in a 2020 research paper, as the world record to date. An ocean’s “tipping point.” Currents in the Atlantic Ocean that regulate the climate for a swath of the planet could slow sharply by century’s end, according to a new analysis. The study adds to a growing body of scientific work that describes how humankind’s continued emissions of heat-trapping gases could set off rapid and hard-to-reverse changes in the environment. Still, comparing the Kuwait reading, taken in the open sea, to a reading in shallow waters off the coast of Florida could be

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Figure 3. Examples of newspaper front pages with climate change stories in July, largely related to ecological and meteorological stories connected to climate change or global warming.

tricky. Just like it's easier to heat up a shallow bath than a deep one, the depth of the water is going to affect temperatures, said Jeff Masters, a former hurricane scientist with the National Oceanic and Atmospheric Administration and a co-founder of Weather Underground, a Web-based weather service".

While July was dominated by these ecological and meteorological-themed stories, several *political* and *economic*-themed media stories about climate change or global warming

continued to earn attention in print, screens and on the airwaves. To begin, further stories (see June 2023 Issue 78) of retreating insurance coverage in the face of climate change made news. For example, *CBS News reporter Christopher J. Brooks noted*, "AAA will not renew the auto and home insurance policies for some customers in Florida, joining a growing list of insurers dialing back their presence in the Sunshine State amid a growing risk of natural disasters. "Unfortunately, Florida's insurance market has become challenging in

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recent years,” the company said in a statement emailed to CBS MoneyWatch. “Last year’s catastrophic hurricane season contributed to an unprecedented rise in reinsurance rates, making it costlier for insurance companies to operate.” AAA declined to say how many customers won’t have their policies renewed, saying only that the change will affect “a small percentage” of policy holders. The company is the fourth insurer over the last year say it is backing away from insuring Floridians, a sign extreme weather linked to climate change is destabilizing the insurance market. Farmers Insurance recently said it will no longer offer coverage in the state, affecting roughly 100,000 customers...Insurers are staging a similar exodus in California, where AIG, Allstate and State Farm have stopped taking on new customers, saying that wildfires are driving up the costs of underwriting policies. Scientists say climate change has made the West warmer and drier over the last three decades and will continue to make weather more extreme and wildfires more frequent and destructive. According to data compiled by the industry-supported Insurance Information Institute, California has more than 1.2 million homes at risk for extreme wildfire, far more than any other state. Insurance premiums are also rising in Colorado because of wildfire risks, and an Oregon effort to map wildfire risk was rejected last year because of fears it would cause premiums to skyrocket”.

Meanwhile, *Wall Street Journal* correspondent **Jean Eaglesham wrote**, “Insurers are caught in the crossfire of an escalating battle over climate change. The biggest U.S. insurance firms are facing pressure from three sides. They are raising premiums and are cutting back coverage because of more damaging storms and wildfires, made worse by climate change. They insure the fossil-fuel producers whose products are blamed for causing climate change. And, as big investors, they fund these same companies. Most try to promote their climate bona fides. This is a recipe for making lots of powerful people unhappy. Texas lawmakers want to ensure that insurance companies “do not hinder” oil companies. Connecticut lawmakers

want the opposite. Republican state attorneys general accuse insurers of going too far in the fight against climate change. Democratic senators are asking if the companies are going far enough”.

US climate envoy John Kerry’s plans to meet with Chinese counterparts in July also gained traction in a busy media environment in July. For example, *Wall Street Journal* correspondent **Sha Hua reported**, “Temperatures in a Chinese village hit a searing 126 degrees Fahrenheit, the highest ever recorded in the country, on the same day that U.S. climate envoy John Kerry arrived in Beijing to try to revive stalled cooperation on climate change between the world’s two largest emitters of carbon dioxide. The record was set on Sunday in Sanbao, a remote township outside the city of Turpan in China’s northwestern Xinjiang region, according to state media. Four other townships in the Turpan Depression, a 19,000 square mile basin of sand dunes and dried up lake beds, recorded temperatures of more than 122 degrees. Heat waves have been ravaging the globe in recent days. More than 100 million Americans are suffering from a streak of 110-degree days blanketing the South and Southwest, while extreme heat is sweeping across Italy, Spain and Greece. Last week was the Earth’s hottest week on record, and followed the hottest June on record”. As a second example, *New York Times* journalists **Vivian Wang and Lisa Friedman noted**, “In the sandstone desert of China’s far west, a local meteorological station recorded an all-time high temperature of 126 degrees. In central China, heat-induced mechanical problems trapped tourists riding on a cable car in midair. The heat wave choking China is so intense that it even became a repeated talking point for John Kerry, President Biden’s special envoy for climate change, as he met with China’s premier on Tuesday in Beijing to discuss cooperation on slowing global warming. “You and I know things are changing,” Mr. Kerry told the premier, Li Qiang, while sitting in the Great Hall of the People, on the edge of Tiananmen Square. He mentioned the reports of the temperature in the western region of Xinjiang on Sunday;

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a commentator at China's meteorological association had called it the highest he knew of in the country. "In the last weeks, scientists have expressed greater concern than ever about what is happening on the planet," said Mr. Kerry, who also met separately with Wang Yi, China's top foreign policy official".

As these three days of meeting wrapped up, further stories captured the progress as well as challenges. For example, [Guardian correspondent Helen Davidson reported](#), "John Kerry has said the climate crisis is a "universal threat" and must be separated from politics during talks between the US and China. Kerry, the US climate envoy and former secretary of state, is in Beijing for talks with senior Chinese officials. It is hoped the talks can help repair relations between the two sides - the world's two largest economies and carbon emitters - before the Cop28 climate talks in Dubai at the end of the year. On Wednesday Kerry met the Chinese vice-president, Han Zheng, saying the two days of talks so far had been constructive but complex. Acknowledging the diplomatic difficulties between the US and China in recent years, Kerry said climate issues should be treated as a "free-standing" challenge that required the collective efforts of the world's largest economies to resolve".

In July, many [cultural](#) stories relating to climate change or global warming also punctuated a competitive news landscape. To illustrate, environmental organizations' and unions' demonstrations and protests garnered attention. Much of the news about these actions were documented in the UK and in Europe. For example, [Guardian correspondent Nadeem Badshah reported](#), "Two Just Stop Oil protesters disrupted the opening night of the BBC Proms at the Royal Albert Hall after running on to the stage. The pair were taken off stage at the west London venue within moments of unfurling their orange banners on Friday evening, according to footage on social media. The climate campaign group wrote on Twitter 'We cannot afford to fiddle while Rome burns'. "Two Just Stop Oil supporters have ran onto the

"New arrivals in Wimbledon in the past few weeks have been bombarded with a huge banner as they exit the station en route to the tennis. "Always like never before," it booms".



A Just Stop Oil protest interrupted Katie Boulter's first-round match against Daria Saville on day three of the tournament. Photo: Adam Davy/AP.

stage at the Royal Albert Hall on the opening night of the BBC proms." One stage invader was Kate Logan, 38, from London. In quotes posted on the Just Stop Oil Twitter account, she said 'Many years ago, I sang with a youth choir at the Albert Hall, never imagining I would one day disrupt a performance here to draw attention to the planetary crisis we find ourselves in'".

Later in the month, [Guardian journalist Alexandra Topping wrote](#), "New arrivals in Wimbledon in the past few weeks have been bombarded with a huge banner as they exit the station en route to the tennis. "Always like never before," it booms. That has certainly been true of the 2023 edition, in which there have been protests and geopolitical rows, breakout stars and sparkling runs, doily dresses and - quite possibly - a finale that will prove to be a pivotal moment in modern tennis...The tournament opened to glorious sunshine but there was unprecedented chaos in the normally

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polite and orderly queue. This year, organisers implemented stricter security measures, which included the use of undercover police officers, in an attempt to halt climate protesters who had already disrupted several events this year”.

Further, [Associated Press correspondent Tales Azzoni reported](#), “Environmental activists briefly interrupted play at the British Open on Friday by throwing orange powder beside the 17th green at Royal Liverpool, prompting American player Billy Horschel to intervene. Police and security guards quickly took action to keep the Just Stop Oil protesters from causing a bigger disruption during the second round. Play resumed not long after the protesters were removed. Horschel was playing the hole at the time and helped a greenside marshal lead one of the protesters away. The other players at the 17th were Corey Connors and Alex Noren. They were marking their balls and getting ready to hit their second shots when the disruption started. All three players made par on the hole”.

As the month wrapped up, [Associated Press correspondent David Keyton reported](#), “Hours after a Swedish court fined Greta Thunberg for disobeying police during an environmental protest at an oil facility last month, the climate activist once again attempted to block access to the facility and was removed by police. Earlier on Monday, Thunberg, 20, admitted to the facts but denied guilt, saying the fight against the fossil fuel industry was a form of self-defense due to the existential and global threat of the climate crisis. “We cannot save the world by playing by the rules,” she told journalists after hearing the verdict, vowing she would “definitely not” back down. The court rejected her argument and fined her 2,500 kronor (about \$240). Charges were brought against Thunberg and several other youth activists from the Reclaim the Future movement for refusing a police order to disperse after blocking road access to an oil terminal in the southern Swedish city of Malmö”. Moreover, [Guardian reporter Damien Gayle noted](#), “Greta Thunberg has been fined by a Swedish court after she was found guilty of disobeying a police order to leave a climate

protest. The 20-year-old climate activist, who from 2018 became the face of the youth climate movement, had admitted taking part in the protest in Malmö in June, but pleaded not guilty on the grounds she had acted out of necessity. “My actions are justifiable,” Thunberg told the court in Malmö, according to local media. “I believe that we are in an emergency that threatens life, health and property. Countless people and communities are at risk both in the short term and in the long term.” Five years ago, Thunberg, then 15, began skipping school each Friday and staging solo climate protests outside the Swedish parliament in Stockholm, holding up a sign reading: “Skolstrejk för klimatet” (school strike for climate). Her weekly demonstrations snowballed into a global wave of youth climate protest, as she gained fame for her youth and her blunt speaking on the dire future faced by young people staring down the barrel of the climate crisis. Although the school strikes movement lost some of its momentum with the outbreak of the coronavirus pandemic, Thunberg has continued to travel the world joining climate protests and speaking at international summits, urging world leaders to act on the climate crisis. It is believed that Monday’s trial is her first conviction for climate protest. Thunberg was part of a group of protesters that blocked the road for oil trucks in Malmö harbour. She was charged for failing to leave when ordered to do so by police”.

In North America, there were also additional actions that earned mediated storytelling. For example, [Washington Post journalist Ellie Silverman reported](#), “Nine protesters with the advocacy group Climate Defiance were arrested Wednesday after disrupting a meeting in a House office building, the group and police said. A Capitol Police spokesperson confirmed the nine people were arrested under a D.C. code that prohibits crowding, obstructing or incommoding. The code is often cited when arresting protesters during peaceful, planned and coordinated actions of civil disobedience... The demonstrators targeted a meeting in the Rayburn House Office Building of the House Sustainable Energy and Environment Coalition

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where Mary Frances Repko, the deputy national climate adviser, was also present, said Michael Greenberg, the founder of Climate Defiance. The advocacy group, which opposes fossil fuels, has disrupted meetings, speeches and events with Democratic leaders to bring attention to the climate crisis”.

As July ended, the Teamsters Union and UPS reached a tentative agreement that avoided a strike. This contained some language that included drivers’ protections from extreme heat attributed to climate change and this generated news. For example, **NBC News reporters J.J. McCorvey and Annie Probert noted**, “UPS agreed last month to a range of new heat-safety protections, including bringing air conditioning to its iconic brown delivery fleet for the first time. The Teamsters hailed those changes as a major breakthrough after years of complaints that working in hot weather has grown more dangerous, with climate change fueling record-breaking summer heat waves across the country”.

Finally, several **scientific** findings and developments sparked media stories during the month of July. Among them, in early July **research by Joan Ballester and colleagues in Nature Medicine** earned media attention in several outlets. For example, **CNN correspondent Rachel Ramirez wrote**, “Nearly 62,000 people died heat-related deaths last year during Europe’s hottest summer on record, a new study has found – more heartbreaking evidence that heat is a silent killer, and its victims are vastly under-counted. The study, published Monday in the journal Nature Medicine, found that 61,672 died in Europe from heat-related illness between May 30 and September 4 last year. Italy was the hardest-hit country, with around 18,000 deaths, followed by Spain with just over 11,000 and Germany with around 8,000. Researchers also found the extreme heat disproportionately harmed the elderly and women. Of the nearly 62,000 deaths analyzed, heat-related mortality rate was 63% higher in women than in men. Age was also an important factor, with the death toll increasing significantly for people aged 65 and

“Nearly 62,000 people died heat-related deaths last year during Europe’s hottest summer on record, a new study has found – more heartbreaking evidence that heat is a silent killer, and its victims are vastly under-counted.”



Paramedics help a patient into an ambulance during a heat wave in Barcelona, Spain. Photo: Angel Garcia/Bloomberg/Getty Images.

over. The planet saw its hottest day on record this week. It’s a record that will be broken again and again. “It’s a very big number,” Joan Ballester, an epidemiologist at ISGlobal and the lead author of the study, told CNN. Eurostat, which is Europe’s statistical office, attempted to quantify the heat wave’s death toll last year by tallying excess deaths – or how many people died more than a typical summer. But Ballester, who lives in Spain and sweated through last year’s heat wave, said the study published Monday was the first to analyze how many deaths last summer were specifically caused by heat. Researchers analyzed temperature and mortality data between 2015 and 2022 for 35 European countries – representing a total population of 543 million people – and used it to create epidemiological models to calculate heat-related deaths”. Meanwhile, **New York Times reporter Delger Erdenesanaa noted**, “The findings suggest that two decades of efforts in Europe to adapt to a hotter world

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have failed to keep up with the pace of global warming. “In an ideal society, nobody should die because of heat,” said Joan Ballester, a research professor at the Barcelona Institute for Global Health and the study’s lead author. This summer is likely to be even worse: On top of climate change, the Earth has entered a natural El Niño weather pattern during summer for the first time in four years, bringing about conditions that will turn up the heat in many parts of the world. The season is already shattering various global temperature records. The researchers who studied last year’s heat waves used data collected by the European Union from 35 countries, including some nonmember states”.

Relating to ecological- and meteorological-themed news stories connected to climate change or global warming in July, scientific research further bolstered attention in the public sphere. For example, [Washington Post correspondent Dan Stillman reported](#), “Not only is Florida sizzling in record-crushing heat, but the ocean waters that surround it are scorching, as well. The unprecedented ocean warmth around the state – connected to historically warm oceans worldwide – is further intensifying its heat wave and stressing coral reefs, with conditions that could end up strengthening hurricanes. Much of Florida is seeing its warmest year on record, with temperatures running 3 to 5 degrees above normal. While some locations have been setting records since the beginning of the year, the hottest weather has come with an intense heat dome cooking the Sunshine State in recent weeks. That heat dome has made coastal waters extremely warm, including “downright shocking” temperatures of 92 to 96 degrees in the Florida Keys, meteorologist and journalist Bob Henson said Sunday in a tweet. “That’s boiling for them! More typically it would be in the upper 80s,” tweeted Jeff Berardelli, chief meteorologist and climate specialist at WFLA-TV in Tampa. The temperatures are so high that they are off the scale of the color contours on some weather maps... The hot waters around Florida are connected to record-breaking ocean heat worldwide. About 40 percent of the world’s oceans are facing a

marine heat wave, NOAA reported. That is the highest percentage on record, and it could reach 50 percent by September. Scientists also attribute the widespread heat of the global ocean waters to human-caused climate change, which has helped boost the oceans to record-warm levels”.

Taking a slightly different tack, media attention to scientific research about oceans turning greener due to climate change were also evident in July. Stories stemmed from a [Nature study](#). For example, [New York Times journalist María Luisa Paúl wrote](#), “In the new study, the researchers first analyzed data from NASA’s Aqua MODIS satellite, which since 2002 has been monitoring ocean color changes, some of which are too subtle for human eyes to see. Twenty years-worth of data showed that colors had shifted in more than half of the world’s oceans, the study states. And scientists said the changes went beyond what’s expected due to natural occurrences. Then, to find out whether that trend was related to climate change, the researchers compared those findings with the results of two models. One of them, Dutkiewicz said, simulated what would happen to the ocean’s colors if greenhouse gases weren’t heating the planet. The other model added in the presence of emissions, which resulted in a shift in color in 50 percent of the ocean – a pattern consistent with the satellite’s observations. Dutkiewicz said it was a worrisome sign for the future of the planet”.

Then, in late July World Weather Attribution [research findings](#) earned media coverage around the globe. For example, [CNN reporter Laura Paddison noted](#), “Extreme heat waves across three continents this month were made significantly more likely by the human-caused climate crisis, according to a new analysis released Tuesday as temperatures are still blazing in parts of the Northern Hemisphere. The “heat hell” searing parts of the United States and southern Europe would have been “virtually impossible” without climate change, while climate change made China’s heat wave at least 50 times more likely, according to a rapid

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attribution analysis from the World Weather Attribution initiative. The WWA, a group of international scientists who assess the role of climate change in extreme weather events, spent a week analyzing the dangerous heat waves that have swept the Northern Hemisphere in July, destroying crops and livestock, triggering wildfires, exacerbating water stress and killing people across three continents". Moreover, [New York Times correspondent Delgar Erdenesanaa reported](#), "Some of the extreme temperatures recorded in the Southwestern United States, southern Europe and northern Mexico at the beginning of the month would have been "virtually impossible" without the influence of human-caused climate change, according to research made public Tuesday. During the first half of July hundreds of millions of people in North America, Europe and Asia sweltered under intense heat waves. A heat wave in China was made 50 times as likely by climate change, the researchers said. World Weather Attribution, an international group of scientists who measure how much climate change influences extreme weather events, focused on the worst heat so far during the northern hemisphere summer. In the United States, temperatures in Phoenix have reached 110 degrees Fahrenheit, roughly 43 Celsius, or higher for more than 20 days in a row. Many places in southern Europe are experiencing record-breaking, triple-digit temperatures. A remote township in Xinjiang, China, hit 126 degrees, breaking the national record".

Later in the month, research published in *Nature Communications* earned several media accounts. For example, [New York Times journalist Raymond Zhong reported](#), "The last time there was a major slowdown in the mighty network of ocean currents that shapes the climate around the North Atlantic, it seems to have plunged Europe into a deep cold for over a millennium. That was roughly 12,800 years ago, when not many people were around to experience it. But in recent decades, human-driven warming could be causing the currents to slow once more, and scientists have been

working to determine whether and when they might undergo another great weakening, which would have ripple effects for weather patterns across a swath of the globe. A pair of researchers in Denmark this week put forth a bold answer: A sharp weakening of the currents, or even a shutdown, could be upon us by century's end. It was a surprise even to the researchers that their analysis showed a potential collapse coming so soon, one of them, Susanne Ditlevsen, a professor of statistics at the University of Copenhagen, said in an interview. Climate scientists generally agree that the Atlantic circulation will decline this century, but there's no consensus on whether it will stall out before 2100. Which is why it was also a surprise, Dr. Ditlevsen said, that she and her co-author were able to pin down the timing of a collapse at all". Meanwhile, US [National Public Radio correspondent Lauren Sommer noted](#), "The Atlantic circulation is a bedrock of the climate system...And the way humans are changing the planet, drastic shifts could happen. It's really a question of when".

As July concluded, the *World Meteorological Organization* and the *European Copernicus Climate Change Service* [released this report](#) that found that Earth experienced the hottest July of at least the last 120,000 years: this gained traction across many media outlets. For example, [CBS News reporter Pamela Falk noted](#), "The United Nations said Thursday that new data from its World Meteorological Organization, gathered in partnership with the European Copernicus Climate Change Service, shows July will be the hottest month ever recorded on the planet. "Climate change is here. It is terrifying, and it is just the beginning," U.N. Secretary-General Antonio Guterres told reporters Thursday. "Anthropogenic [human-caused greenhouse gas] emissions are ultimately the main driver of these rising temperatures," said Carlo Buontempo, director of the Copernicus service. "Extreme weather which has affected many millions of people in July is unfortunately the harsh reality of climate change and a foretaste of the future"".

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## AUGUST “The latest major climate disaster to wreak havoc”



Smoke rises from a wildfire near Lodgepole, Alberta. Photo: Alberta Wildfire via The New York Times.



Media coverage of climate change or global warming in newspapers around the globe **dropped 8%** from July 2023 and was also **3% lower** than August 2022 levels. International wire services went **down 11%** from July 2023.

August media coverage of climate change or global warming in newspapers around the globe dropped 8% from July 2023 and was also 3% lower than August 2022 levels. International wire services went down 11% from July 2023. Compared to the previous month, coverage dipped in Africa (-1%), Asia (-8%), the Middle East (-10%), the European Union (EU) (-15%), and in Latin America (-17%). Meanwhile, coverage increased from the previous month of July in North America (+5%), and in Oceania (+21%). Figure 1 shows trends in newspaper media coverage at the global scale - organized into seven geographical regions around the world - from January 2004 through August 2023.

Among countries that we at the Media and Climate Change Observatory (MeCCO) monitor, coverage was up 10% in Canadian print media as well as up 3% in US print.

To begin, media coverage in August continued to feature *ecological* and *meteorological* dimensions of climate change or global warming news stories. For instance, the beginning of the month saw news of flooding in China, Typhoon Doksuri coming on land in Japan, and a heat wave across South Korea with connections made to climate change. For example, *Guardian* correspondent **Damien Gayle reported**, “Ma Jun, the director of the Institute of Public and Environmental Affairs, a Beijing-based NGO, said that while the typhoon had brought the rain, rising ocean temperatures caused by climate change were also contributing to the extreme weather. “China has suffered unprecedented extreme heatwaves since last year ... this year, there are record-breaking high temperatures in northern China,” Ma told AFP. “These heatwaves are linked to global warming, and this is what most climate scientists around the world tend to agree.” More is in store for north-

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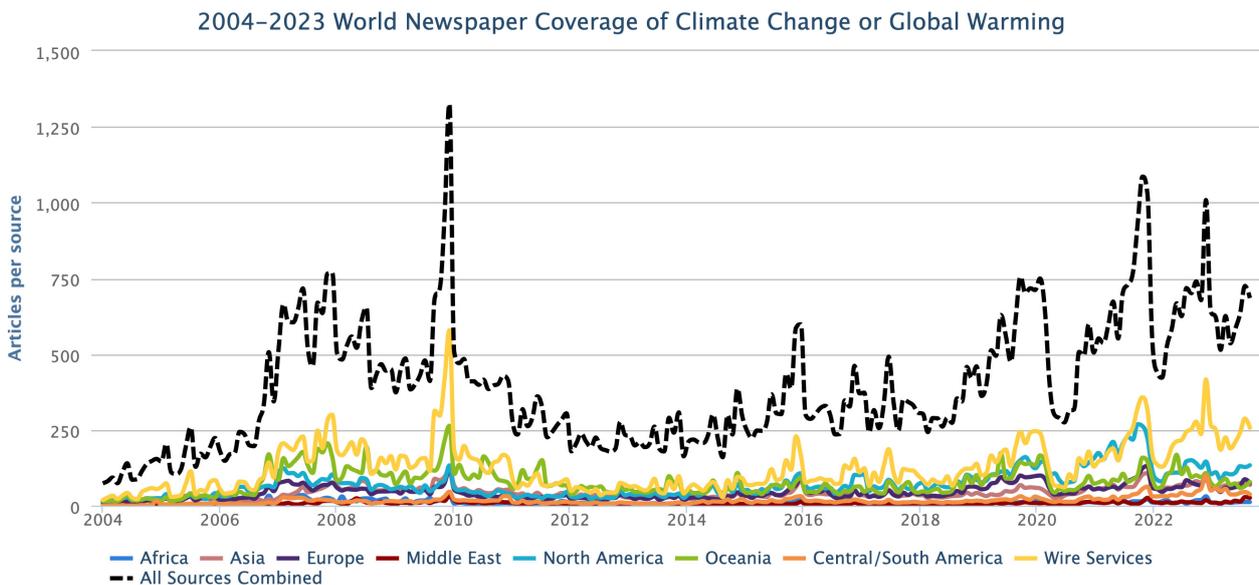


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through August 2023.

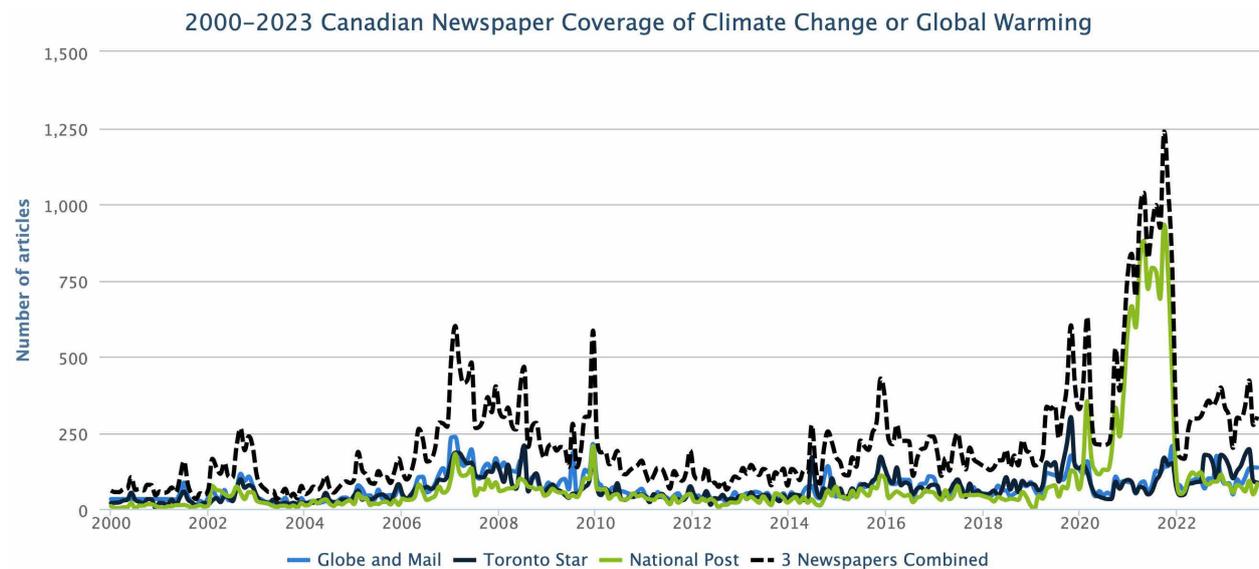


Figure 2. Newspaper coverage of climate change or global warming in Canadian print sources *Globe and Mail*, *Toronto Star*, and *National Post* from January 2004 through August 2023.

east China, forecasters say. Typhoon Khanun, the sixth typhoon of this year, is approaching the country's eastern coast, after battering Okinawa island, Japan, where it knocked out power to 200,000 homes".

Meanwhile, tragic fires on the Hawaiian island of Maui generated considerable media attention as the extent of the devastation – with connections made with a changing climate – was understood. For example, [Associated Press correspondents Claire Rush, Seth Borenstein, and Jennifer McDermott reported](#), "Hawaii went from lush to

bone dry and thus more fire-prone in a matter of just a few weeks – a key factor in a dangerous mix of conditions appear to have combined to make the wildfires blazing a path of destruction in Hawaii particularly damaging. Experts say climate change is increasing the likelihood of these flash droughts as well as other extreme weather events like what's playing out on the island of Maui, where dozens of people have been killed and a historic tourist town was devastated".

Also, media attention to Canadian wildfires – with connections to climate change – circulated in

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August. For example, [ABC News correspondents Stephanie Ebbs, Julia Jacobo, Daniel Manzo, and Daniel Peck reported](#), “The historic wildfire season currently plaguing Canada is expected to persist, perhaps becoming even worse in the coming weeks – a potentially devastating forecast made more likely due to human-caused climate change, according to new research. Drought and hot conditions contributed to an unprecedented start to the fire season in Canada and has kept the fires burning all over the country since late April says Kristina Dahl, senior climate scientist at the Union of Concerned Scientists. By June, the smoke emitted from the wildfires reached the highest amount ever recorded in the country... The fire season would not have gotten this bad were it not for anthropogenic, or human-caused, climate change, according to a new study released Tuesday by World Weather Attribution, an international group of academics and officials that evaluate the influence of climate change on extreme weather events”.

Later in August, hurricane activity – particularly Hilary and Idalia – prompted news stories that linked these events with climate change trends. For example, [Associated Press correspondents Jordi Lebrija and Damian Dovarganes reported](#), “Tropical Storm Hilary inundated streets across Mexico’s arid Baja California Peninsula with deadly floodwaters Sunday before moving over Southern California, where it swamped roads and downed trees, as concerns mounted that flash floods could strike in places as far north as Idaho. Forecasters said Hilary was the first tropical storm to hit Southern California in 84 years, bringing floods, mudslides, high winds, power outages and the potential for isolated

“Hawaii went from lush to bone dry and thus more fire-prone in a matter of just a few weeks – a key factor in a dangerous mix of conditions appear to have combined to make the wildfires blazing a path of destruction in Hawaii particularly damaging. Experts say climate change is increasing the **likelihood of these flash droughts** as well as other extreme weather events like what’s playing out on the island of Maui.”



The devastating Lahaina fire on the Hawaiian island of Maui reduced much of the historic town to ash. Photo: Jae C. Hong/Associated Press.

tornadoes. The storm already dumped more than 6 inches (15.24 centimeters) of rain in some mountain communities and threatened more than an average year’s worth of rain in inland desert areas. Hilary made landfall along the Mexican coast in a sparsely populated area about 150 miles (250 kilometers) south of Ensenada Sunday, then moved through mudslide-prone Tijuana, threatening the improvised homes that cling to hillsides just south of the U.S. border. By Sunday evening, the storm had moved over San Diego and was headed north into inland desert areas. As evening fell in California, the National Weather Service in Los Angeles warned of significant flooding risk throughout populous mountain areas along the coast northeast of Los Angeles... Hilary is just the latest major climate

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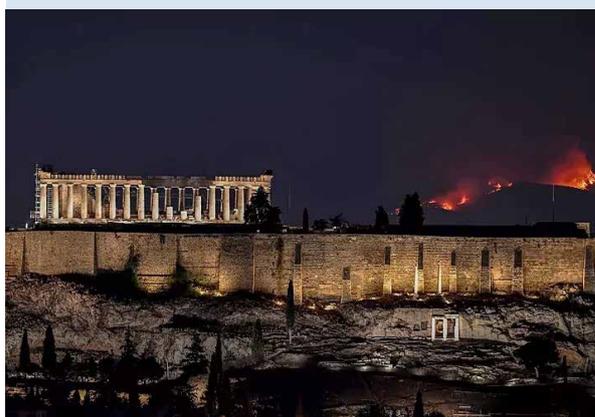
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disaster to wreak havoc across the U.S., Canada and Mexico. Hawaii's island of Maui is still reeling from a blaze that killed over 100 people and ravaged the historic town of Lahaina, making it the deadliest U.S. wildfire in more than a century. Firefighters in Canada are battling that nation's worst fire season on record".

As an example of hurricane Idalia reporting - with connections made to climate change - US [National Public Radio correspondent Alejandra Borunda explained](#), "It has been a summer of disasters-and many of them were made worse, or more intense, by human-caused climate change. Wildfires burned from coast to coast across Canada. Vermont was inundated by unprecedented floods. Phoenix's temperatures topped 100 ° F for a full month. And now Hurricane Idalia, the first major hurricane of the season, is ripping across Florida and into the Southeast". As a second example, [Guardian journalists Richard Luscombe and Maya Yang reported](#), "The storm had rapidly intensified overnight, fueled by the abnormally record hot waters in the Gulf. Studies have shown evidence that Atlantic hurricanes are becoming stronger and intensifying more rapidly due to these accelerants resulting from the climate crisis. More than 280,000 customers in Florida were without electricity, according to poweroutage.us, with a further 50,000 out in Georgia. Kevin Guthrie, Florida's director of emergency management, said 15 tornado warnings were issued for affected counties".

In Europe, many news stories covered fires across the continent as they made connections to a changing climate. For example, [El Mundo journalist Carlos Fresneda](#) wrote about the biggest fire in the history of Europe: "The largest fire in the last 23 years on EU soil has already devastated more than 80,000 hectares (the extent of the New York metropolitan area) in northern Greece, causing 20 deaths and requiring the assistance of fire departments from other European nations, including Spain. The Greek Government blames the wave on climate change but arrests 163 suspected arsonists since the season began".

"The largest fire in the last 23 years on EU soil has already devastated more than **80,000 hectares** (the extent of the New York metropolitan area) in northern Greece."



A forest burns behind the ancient Parthenon Temple, atop the Acropolis hill, as a wildfire rages on the outskirts of Athens on August 22. Photo: Aris Messinis/AFP.

Among news in August looking back on the record-breaking heat across the globe in the month of July, [Guardian correspondent Nadeem Badshah reported](#), "July has been confirmed as the hottest month on record globally after several heatwaves in parts of Europe, according to the Copernicus Climate Change Service (C3S). The global average temperature was 16.95C last month, surpassing the previous record set in 2019 by a substantial 0.33C. Temperatures exceeded 40C last week in several countries across Europe including Greece, France, Italy and Spain. Wildfires forced the evacuation of thousands of residents and tourists from several Greek islands including Rhodes. There were also high temperatures in South American countries, despite it being winter there. July is estimated to have been about 1.5C warmer than the average for 1850-1900, according to C3S, and 0.72C warmer than the 1991-2020 average". As a second example, [CBS News correspondent Emily Mae Czachor noted](#), "After extreme temperatures scorched vast sections of the planet in July, a worrying

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climate milestone anticipated by scientists has been corroborated by yet another prominent study. This time, it came from agencies in the U.S., where more than half of the population was subject to heat warnings at one point during the last month...officials at NASA and the National Oceanic and Atmospheric Administration unveiled new data indicating that July was the hottest month on record, with both global sea-surface and land temperatures soaring well above longstanding averages. According to NOAA and NASA, Earth in 2023 saw its warmest July since temperature record-keeping began 174 years ago. Since July is climatologically the hottest month of the year, this year's numbers likely mean it was the hottest month on record overall, NOAA said in a news release. In a separate release issued Tuesday, NASA said scientists at its Goddard Institute for Space Studies in New York determined that "July 2023 was hotter than any other month in the global temperature record." The data came on the heels of a similar report released earlier in August by the Copernicus Climate Change Service, a branch of the European Union's space program. That report also identified July 2023 as Earth's hottest month on record, noting that the global monthly temperature was unusually higher than average. July was so hot that officials at the United Nations announced it would likely break the planet's monthly record before July was even over. Later reports by the European climate agency and now by agencies in the U.S. have reinforced those suspicions".

Next, many *scientific* findings prompted media stories during the month of August. Among them, in early August [a report from Nexus Media News](#) that found that 81% of humans endured a warmer July 2023 as a result of human-caused climate change earned media attention. For example, [Washington Post journalist Ian Livingston noted](#), "July 2023 will go down as the hottest month on record across the globe, and perhaps the hottest in at least

"July 2023 will go down as the hottest month on record across the globe, and perhaps the **hottest in at least 120,000 years**, according to climate scientists."



Smoke from fires raging in the northwestern Tunisian town of Tabarka covers the sun amidst a blistering heatwave on July 24. Photo: Fethi Belaid/AFP/Getty Images.

120,000 years, according to climate scientists. During this sweltering month for the planet, countless daily, monthly and all-time record high temperatures were reached in multiple regions, often concurrently. A rash of intense heat domes – zones of high pressure sprawled across the northern hemisphere – plagued Asia, southern Europe and northern Africa, North America and much of the tropics including the Caribbean. Extreme heat was even observed on several occasions across the southern hemisphere, where it is the middle of winter. China registered an all-time high temperature for the country of 126 degrees (52.2 degrees Celsius), while the July 16 high of 128 degrees (53.3 Celsius) in Death Valley, Calif., was two degrees shy of the highest reliably measured temperature on Earth. Numerous countries surpassed 122 degrees (50 Celsius) for highs. In the Middle East, the heat index reached 152 degrees (66.7 Celsius), near the limit of human survival... While temperatures are beginning to cool from their annual peaks in much of

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Figure 3. Examples of newspaper front pages with climate change or global warming-related stories in August 2023.

the northern hemisphere, the unrelenting hot pattern is poised to roll onward. Despite brief pauses in the worst heat in the Southwest United States, warmer-than-normal weather is probable through August in the region, as it is in East Asia and Japan, as well as North Africa and southern Europe”.

Also connecting meteorological and ecological themes with scientific stories, there were further links made between the heat and climate change. For example, *Washington Post*

correspondent **Kasha Patel** wrote, “This year is increasingly likely to become the hottest year on record, due to a rapidly strengthening El Niño weather pattern and unprecedentedly hot summer. According to climate scientist Zeke Hausfather, 2023 now has an 85 percent chance of becoming the hottest year in the books based on calculations with temperature data from the European Commission’s Copernicus Climate Change Service. Analyses with other temperature data – from the National Oceanic and Atmospheric Administration and NASA,

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among others – have also shown more than a 50 percent chance that 2023 will be the warmest on record. At the end of June, the nonprofit Berkeley Earth forecast an 81 percent chance of a record 2023”.

Several *political* and *economic*-themed media stories about climate change or global warming continued to earn attention in print, screens, and on the airwaves in August. To begin, news of drought – with connections made to climate change – and its impacts on shipping through the Panama Canal was abundant. For example, [journalist Joanna Partridge at The Guardian wrote](#), “Commercial ships are facing long queues and delays to travel through the Panama Canal as a lengthy drought in the Central American country has led to a cut in the number of vessels able to pass through one of the world’s most important trading routes. In a fresh demonstration of the impact of the climate crisis on global business and trade, the Panama Canal Authority (ACP), which manages the waterway, introduced restrictions on the number of transiting vessels as a result of the drought. An extended dry season has reduced the availability of water, required to allow vessels to pass through the canal’s locks, which has triggered a logjam of ships awaiting their turn”.

As August unfolded, many media stories emerged about a ruling in the US state of Montana in favor of youth seeking to protect their climate and environment. For example, [CNN journalist Ella Nilson reported](#), “A Montana judge handed a significant victory on Monday to more than a dozen young plaintiffs in the nation’s first constitutional climate trial, as extreme weather becomes more deadly and scientists warn the climate crisis is eroding

“Ecuadorians have voted in a **historic referendum** to halt the development of all new oil wells in the Yasuní national park in the Amazon, one of the most biodiverse regions on the planet.”



Waorani indigenous people campaigning for a ‘yes’ vote to stop oil exploration in Yasuní national park. Photograph: José Jácome/EPA.

our environment and natural resources. In a case that could have legal reverberations for other climate litigation, District Court Judge Kathy Seeley ruled that Montana’s continued development of fossil fuels violates a clause in its state constitution that guarantees its citizens the right to a “clean and healthful environment.” Montana is one of several states that have explicit environmental guarantees written into their state constitutions. While Seeley’s ruling won’t prevent mining or burning fossil fuels in the state, it will reverse a recently passed state law that prohibits state agencies from considering planet-warming pollution when permitting fossil fuel projects. It is also a landmark win for young climate advocates who are turning more to the courts for judgments on the causes and impacts of the climate crisis”.

Later in August, a successful Ecuadorian referendum that blocks oil drilling in the Chocó Andino rainforest generated many news headlines. For example, [Guardian journalist](#)

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**Dan Collyns reported**, “Ecuadorians have voted in a historic referendum to halt the development of all new oil wells in the Yasuní national park in the Amazon, one of the most biodiverse regions on the planet. Voters opted to safeguard the unique biosphere by a margin of nearly 20% with more than 90% of the ballot counted – with more than 58% in favour and 41% against, according to Ecuador’s National Electoral Commission. Voting took place in the first round of presidential elections on Sunday. The move will keep about 726m barrels of oil underground in the Yasuní national park, which is also home to the Tagaeri and Taromenane people, two of the world’s last “uncontacted” Indigenous communities living in voluntary isolation. At a time when the climate crisis is intensifying around the world and the Amazon rainforest is fast approaching an irreversible tipping point, Ecuador has become one of the first countries in the world to set limits on resource extraction through a democratic vote. In a second referendum, citizens in Quito also voted to block gold mining in the Chocó Andino, a sensitive highland biosphere near the capital city, by an even larger margin of about 68% to 31%”. As a second example, **El País journalists Ana Cristina Basantes and Carolina Mella noted**, “After a decade of fighting to save the Yasuní National Park, Ecuador will end oil extraction in this environmental reserve. This was decided by 58.9% of the more than 10.2 million Ecuadorians who have voted in the referendum held this Sunday to stop oil exploitation in block 43 of the ITT (which extends through the areas of Ishpingo, Tiputini and Tambococha). This is a historic consultation, because of what it means for the environmental movement and because it is the first time that a popular initiative consultation has been carried out in this Latin American country. With the victory of the yes, the current oil exploitation is suspended and it will not be possible to sign new contracts for the extraction of this resource”.

Also, US President Joe Biden’s visit to Maui island made news as he drew lines between the tragedy and insufficient climate policy action to date. For example, **National Public Radio**

“Climate activists have spray painted a superyacht, blocked private jets from taking off and plugged holes in golf courses this summer as part of an intensifying campaign against the emissions-spewing lifestyles of the ultrawealthy.”



Environmental activists of Stay Grounded and Greenpeace demonstrate while handcuffing themselves to a plane during the European Business Aviation Convention and Exhibition at the Geneva Airport. Photo: Laurent Gillieron/Keystone/AP.

**(US) reporters Asma Khalid, Tamara Keith, and Domenico Montanaro noted**, “The president’s visit to the state is a fresh reminder of the increasing frequency and severity of extreme weather in the United States – and of his fraught reputation among climate-conscious voters”.

Last, in August many **cultural** stories relating to climate change or global warming were evident. To illustrate, stories of activism and protest relating to climate advocacy were most pervasive. For example, **Guardian correspondent Helen Pidd reported**, “Five Greenpeace activists have been arrested after ending their rooftop protest at Rishi Sunak’s North Yorkshire mansion, which they mounted to “drive home the dangerous consequences of a new drilling frenzy”. The campaigners draped

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the prime minister's Grade II-listed manor house with an oil-black fabric on Thursday morning. Police said they were managing the situation after being called to the home in Kirby Sigston, near Northallerton, at about 8am after the activists climbed on to roof while Sunak, his wife and daughters were on holiday in California. The group came down at about 1.15pm and were spoken to by officers before being driven away in police vans. The deputy prime minister, Oliver Dowden, left in charge of the country in Sunak's absence, told the protesters to "stop the stupid stunts". A former deputy chief constable of North Yorkshire police claimed it was a "major breach of security", as he called for an "investigation into how this has been allowed to happen". After reaching the top of the house using ladders and climbing ropes at about 6am, activists unfolded 200 sq metres of fabric to cover a whole side of the property. Two other activists unfurled a banner stating: "Rishi Sunak - Oil Profits or Our Future?" across the grass in front of the house... the prime minister pledged to "max out" the UK's oil and gas reserves as he announced more than 100 new licences for North Sea drilling, which experts said could be catastrophic for the climate. But in 2021, the International Energy Agency said there could

be no new oil, gas and coal developments if the world was to reach net zero by 2050. Greenpeace said the protest aimed to stop Sunak from approving Rosebank, the biggest undeveloped oil and gas field in the North Sea, the operations of which would be enough to exceed the UK's carbon budgets".

Elsewhere, *Associated Press* correspondent **David Brunat** reported, "Climate activists have spray painted a superyacht, blocked private jets from taking off and plugged holes in golf courses this summer as part of an intensifying campaign against the emissions-spewing lifestyles of the ultrawealthy. Climate activism has intensified in the past few years as the planet warms to dangerous levels, igniting more extreme heat, floods, storms and wildfires around the world. Tactics have been getting more radical, with some protesters gluing themselves to roads, disrupting high-profile sporting events like golf and tennis and even splashing famous pieces of artwork with paint or soup. They're now turning their attention to the wealthy, after long targeting some of the world's most profitable companies - oil and gas conglomerates, banks and insurance firms that continue to invest in fossil fuels".

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SEPTEMBER

“The planet is losing resilience and the patient is sick”



A woman is silhouetted against the setting sun as triple-digit heat indexes continue in Kansas City, Photo: Charlie Riedel/AP.



Media coverage of climate change or global warming in newspapers around the globe **increased 7%** from August 2023, but **dipped slightly 1%** from September 2022 levels. International wire services continued to **increase 6%**, as radio coverage also **increased 24%** from August 2023.

September media coverage of climate change or global warming in newspapers around the globe increased 7% from August 2023, but dipped slightly (-1%) from September 2022 levels. International wire services continued to increase (+6%), as radio coverage also continued to rise (+24%) from August 2023. Compared with August 2023, coverage was down in North America (-12%), and in Oceania (-15%). Yet, the quantity of coverage increased in the European Union (EU) (+7%), Asia (+14%), Latin America (+27%), the Middle East (+35%), and in Africa (+71%). Figure 1 shows trends in newspaper media coverage at the global scale - organized into seven geographical regions around the world - from January 2004 through September 2023.

Our 26-member team at the Media and Climate Change Observatory (MeCCO) continues to provide three international and seven ongoing regional assessments of trends in coverage,

along with 16 country-level appraisals each month. Visit our website for open-source datasets and downloadable visuals. Of note in September 2023, Japanese print coverage in *Asahi Shimbun*, *Yomiuri Shimbun*, and *Mainichi Shimbun* went up 37% (see Figure 2) from the previous month.

First, *political* and *economic*-themed media stories about climate change or global warming were prevalent in September. At the start of the month, African leaders met in Nairobi, Kenya to discuss climate policy action: this generated news attention. For example, *Associated Press* correspondents *Cara Anna and Evelyne Musambi reported*, “The first African Climate Summit opened Monday with heads of state and others asserting a stronger voice on a worldwide issue that affects their continent the most even though its 1.3 billion people contribute to global warming the least. Kenyan President William Ruto’s government and the African Union launched a ministerial session as

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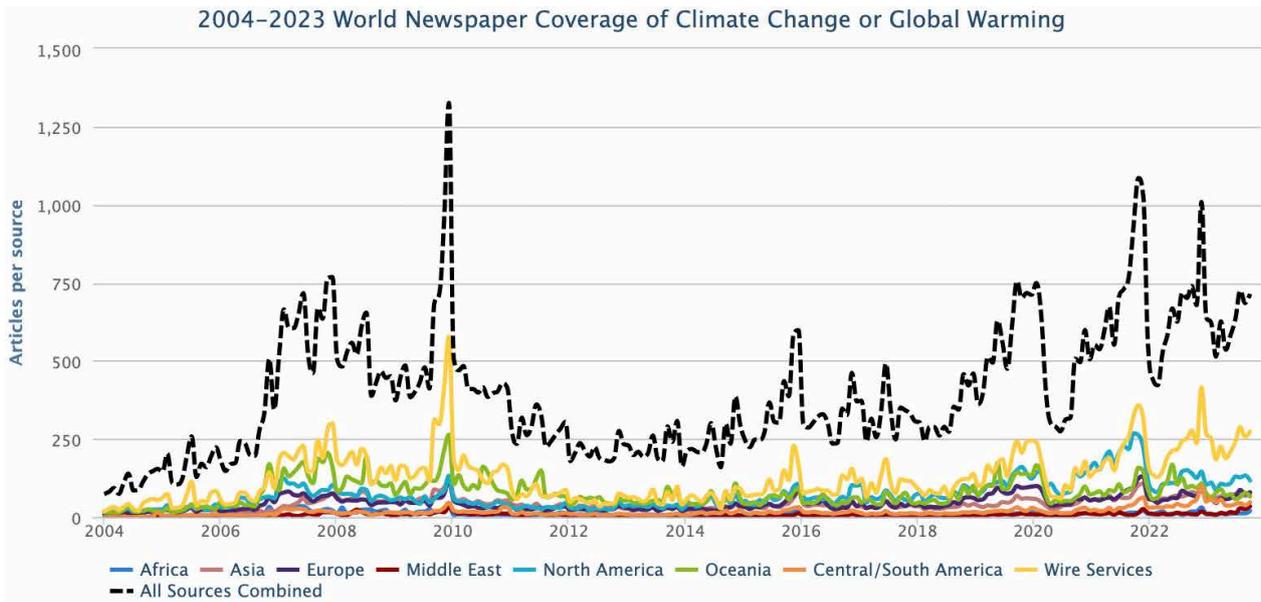


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through September 2023.

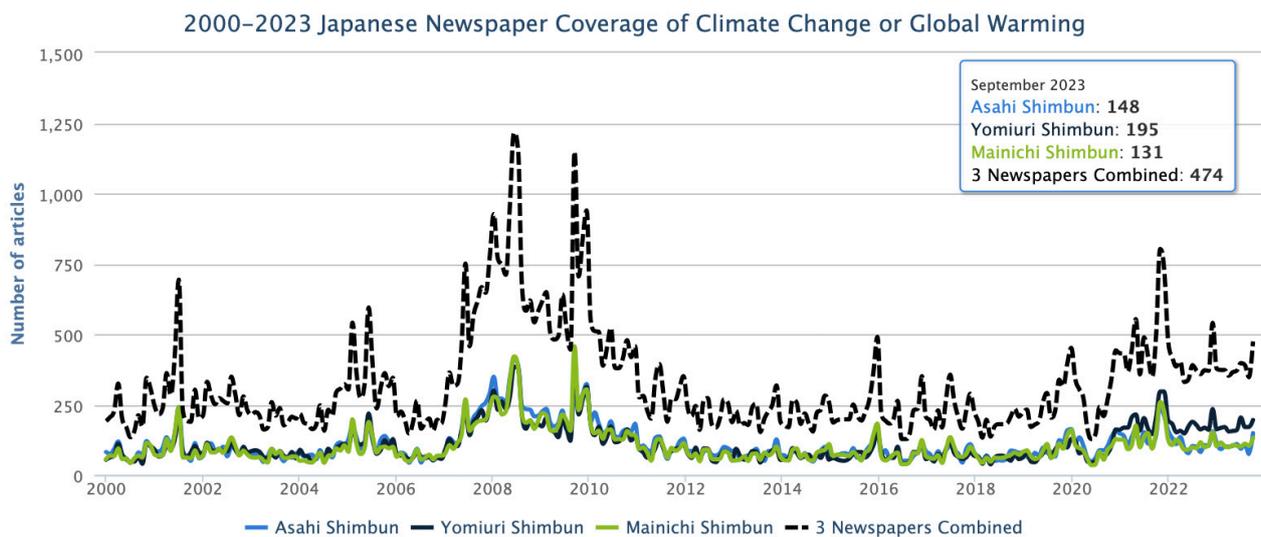


Figure 2. Newspaper coverage of climate change or global warming in Japan sources *Asahi Shimbun*, *Yomiuri Shimbun*, and *Mainichi Shimbun* from January 2004 through September 2023.

more than a dozen heads of state began to arrive, determined to wield more global influence and bring in far more financing and support. The first speakers included young people, who demanded a bigger voice in the process. “For a very long time we have looked at this as a problem. There are immense opportunities as well,” Ruto said of the climate crisis, speaking of multibillion-dollar economic possibilities, new financial structures, Africa’s huge mineral wealth and the ideal of shared prosperity. “We are not here to catalog grievances,” he said”. As the summit concluded, [New York Times journalist Max Bearak wrote](#), “Heads of state from across

Africa concluded an inaugural climate summit on Wednesday in Nairobi, Kenya’s capital, by issuing a declaration that called for an urgent restructuring of the way wealthier nations engage with the continent. The declaration stressed numerous times that rather than being a hapless victim, Africa was primed for leadership on clean energy and environmental stewardship. But to make that happen, the statement said, the world’s industrialized countries, which are largely responsible for the pollution that is causing climate change, must first unlock access to their wealth through investments, instead of relegating their

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contributions to aid when disasters strike. This lack of financing is one of the biggest issues dividing rich and poor nations as the world struggles to slash carbon dioxide emissions. It will be one of the main points of contention at the United Nations global climate summit starting Nov. 30 in Dubai. The historic gathering in Nairobi was partly an effort by poorer nations to amplify their argument. At the event, investors announced what amounted to around \$23 billion that would go toward projects including solar microgrids, carbon markets and reforestation. But it was unclear how much of that money represented commitments, as opposed to intentions. Kenya's president, William Ruto, who acted as the summit's host and master of ceremonies, said that Africa had 60 percent of the world's renewable energy potential and nearly a third of the minerals crucial to electrifying industries that are currently dependent on planet-warming fossil fuels. Meanwhile, 600 million people in Africa have little or no access to electricity. "We must go green fast, before industrializing, and not vice versa," Mr. Ruto said".

Shortly after the African meeting, the long-anticipated United Nations (UN) 'Global Stocktake' report was released. Reporting was widespread regarding how various countries were largely falling short of Paris Climate Agreement commitments. For example, [Wall Street Journal correspondent Matthew Dalton reported](#), "Government plans to limit greenhouse gas emissions in the coming years aren't nearly ambitious enough to limit global warming in line with the Paris climate accord, the United Nations said in a report that examines progress toward the agreement's goals eight years after it was signed. The Paris accords call for governments to keep warming well under 2 degrees Celsius compared with preindustrial temperatures and "pursue efforts" to limit it to 1.5 degrees. It also requires governments to review

"The world's industrialized countries, which are largely responsible for the pollution that is causing climate change, must first unlock access to their wealth through investments, instead of relegating their contributions to aid when disasters strike. This lack of financing is one of the biggest issues dividing rich and poor nations as the world struggles to slash carbon dioxide emissions."



Members of the Turkana tribe protesting outside the summit. Photo: Brian Inganga/Associated Press.

implementation of the accord every five years, starting in 2023. The report, published Friday, largely relies on previous analyses conducted by the U.N. It finds that global emissions must fall 43% between 2019 and 2030 to limit warming to 1.5 degrees. The plans submitted as of September 2022 would cut emissions by only 3.6% in 2030 compared with 2019. The report also chastises wealthy countries for not providing enough financial support to the developing world to cut emissions, one of the main goals of the Paris accord". Meanwhile, [Straits Times journalist David Fogarty reported](#), "Called the Global Stocktake, it is the result of two years of assessing how far off course Mankind is in reducing the risks from climate change. But far from just another gloomy report, it will also offer suggestions on positive steps to tackle the problem. "It's a moment to take a long, hard look at the state of our planet and chart a better

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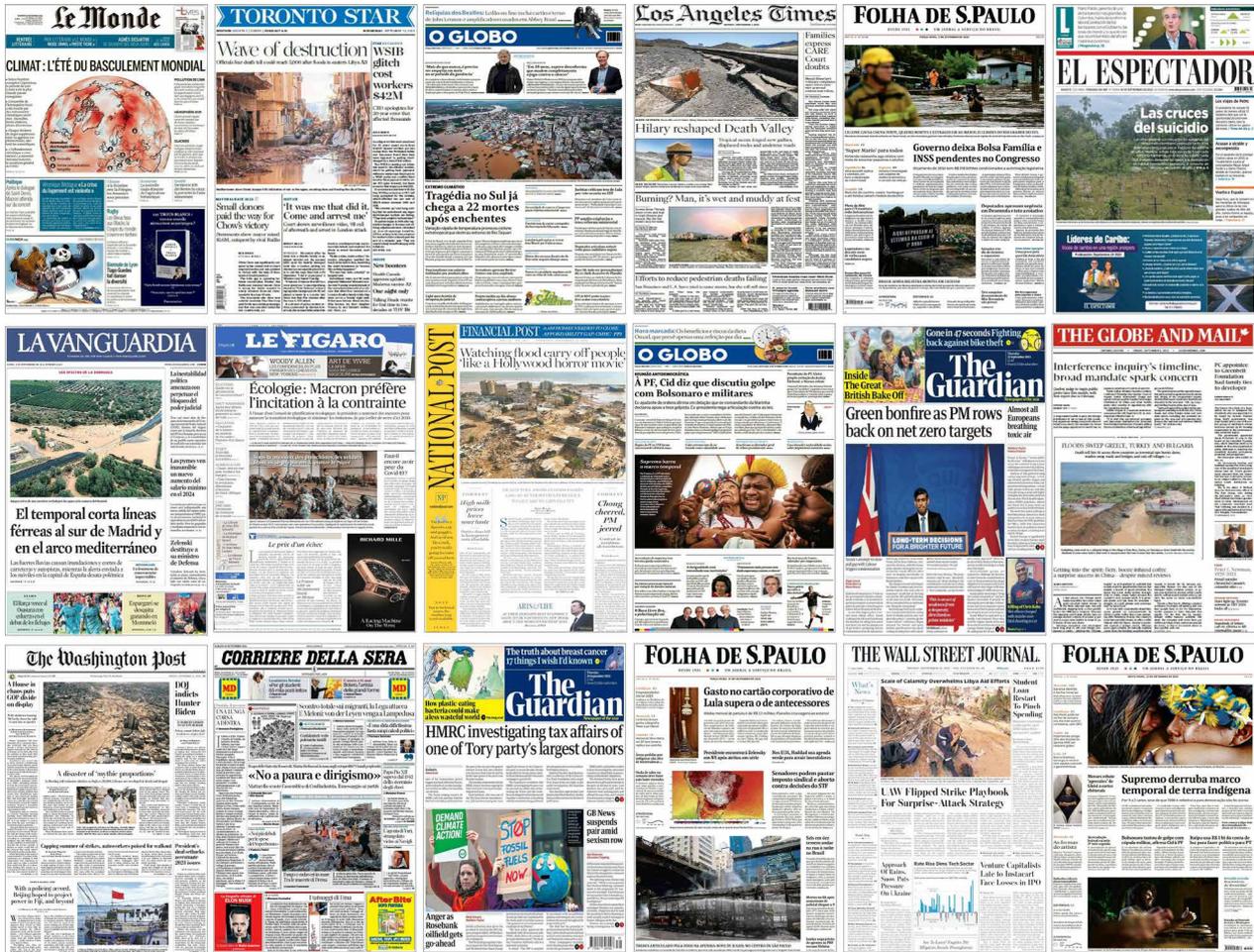


Figure 3. Examples of newspaper front pages with climate change stories in September, related to UN General Assembly and 'Climate Week' stories connected to climate change or global warming.

course for the future," said the UN Framework Convention on Climate Change (UNFCCC), which is overseeing the assessment".

In mid-September, the UN General Assembly and the associated 'Climate Week' in New York City dominated news reporting on climate change. For example, **BBC correspondent James Landale reported**, "The 140 or so world leaders gathering in New York for their annual assembly have a lot on their plate: Russia's invasion of Ukraine, a global cost of living crisis, a worsening climate emergency, and the disruption of new technologies such as artificial intelligence. There are disagreements internationally not only over what is most important but also what the remedies should be. "People are looking to their leaders for a way out of this mess," says Antonio Guterres, the UN Secretary General". As a second example, **journalist Yvette Tanamal from The Jakarta Post noted**, "With the world continuing

to grapple with the post-COVID-19 recovery, the economic and political tension sparked by the war in Ukraine, as well as an ever-worsening climate crisis, thousands of delegates from across the world are gathering in New York in the United States to advance key talks and navigate the current precarious geopolitical landscape".

Second, **ecological** and **meteorological** dimensions of climate change or global warming were detected in many news stories. To illustrate, ongoing stories of heat records - with links made to global warming - proliferated. For example, **Washington Post reporter Dan Stillman wrote**, "Fueled by unprecedented heat on much of Earth's land and ocean surface, this summer was the planet's hottest on record "by a large margin," the European Union's Copernicus Climate Change Service announced...August capped this summer's extreme heat with a monthly average temperature of 62.3 degrees Fahrenheit

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(16.82 Celsius), which was 0.71 C warmer than the long-term average and 0.31 C warmer than the previous warmest August in 2016. It was the planet's second-hottest month ever observed, closely following July, which was the hottest. The average surface air temperature for June, July and August – which scientists consider “meteorological summer” – was 62.2 degrees F (16.77 degrees C), based on analysis of billions of weather instrument measurements. That was 0.66 C above the long-term average, which is considered a large margin when comparing seasonal averages in temperature. Every summer since 2009 has been warmer than average”.

Also in September, there were many stories linking climate change with torrential rains and flooding in and around the Libyan community of Derna. For instance, [CNN correspondent Hamdi Alkhshali reported](#), “More than 5,000 people are presumed dead and 10,000 missing after heavy rains in northeastern Libya caused two dams to collapse, surging more water into already inundated areas. Tamer Ramadan, head of the International Federation of Red Cross and Red Crescent Societies delegation in Libya, gave the numbers of missing people during a briefing to reporters in Geneva, Switzerland, on Tuesday. “The death toll is huge,” she said. At least 5,300 people are thought dead, said the interior ministry of Libya’s eastern government on Tuesday, state media LANA reported. CNN has not been able to independently verify the number of deaths or those missing... The rain, which has swept across several cities in Libya’s north-east, is the result of a very strong low-pressure system that brought catastrophic flooding to Greece last week and moved into the Mediterranean before developing into a tropical-like cyclone known as a medicane. The deadly storm comes in an unprecedented year of climate disasters and record-breaking weather extremes, from devastating wildfires to oppressive heat. Just as ocean temperatures around the world soar off the charts due to planet-warming pollution, the temperature of the Mediterranean is well-above average, which scientists say fueled the storm’s heavy rainfall. “The warmer water does not only fuel those storms in terms of rainfall intensity, it also makes

“More than 5,000 people are presumed dead and 10,000 missing after heavy rains in northeastern Libya caused two dams to collapse, surging more water into already inundated areas. Tamer Ramadan, head of the International Federation of Red Cross and Red Crescent Societies delegation in Libya, gave the numbers of missing people during a briefing to reporters in Geneva, Switzerland. “The death toll is huge.”



Overturned cars lay among other debris caused by flash floods in Derna, Libya, on September 11, 2023. Photo: AFP/Getty Images.

them more ferocious,” Karsten Haustein, climate scientist and meteorologist at Leipzig University in Germany, told the Science Media Center”.

Third, many [cultural](#) stories relating to climate change or global warming were found in our ongoing monitoring work. To begin, protests across many regions generated ongoing news attention. For example, [Associated Press correspondents David Keyton, Aaron Favila, Philipp Jenne, Justin Kabumba, and Achmad Ibrahim reported](#), “From Europe to Africa to southeast Asia, tens of thousands of climate activists launched protests to call for an end to the burning of planet-warming fossil fuels as the globe suffers dramatic weather extremes and record-breaking heat, with plans to continue through the weekend. The protests – driven by several mostly youth-led, local and global climate groups and organizations, including

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Greta Thunberg's Fridays for Future movement – were taking place in dozens of countries and hundreds of cities worldwide. Several thousand people marched in Vienna, holding up signs demanding higher taxes for carbon emissions and an end to meat consumption. Members of the student climate awareness group Last Generation sat down in front of parliament, and speakers called on government to quit oil and gas and pass laws to save the climate”.

Several news accounts were focused on demonstrations outside of the aforementioned UN General Assembly meeting in New York City. For example, [Associated Press correspondent Seth Borenstein reported](#), “Yelling that the future and their lives depend on ending fossil fuels, tens of thousands of protesters on Sunday kicked off a week where leaders will try once again to curb climate change primarily caused by coal, oil and natural gas. But protesters say it's not going to be enough. And they aimed their wrath directly at U.S. President Joe Biden, urging him to stop approving new oil and gas projects, phase out current ones and declare a climate emergency with larger executive powers... The March to End Fossil Fuels featured such politicians as Rep. Alexandria Ocasio-Cortez and actors Susan Sarandon, Ethan Hawke, Edward Norton, Kyra Sedgwick and Kevin Bacon. But the real action on Broadway was where protesters crowded the street, pleading for a better but not-so-hot future. It was the opening salvo to New York's Climate Week, where world leaders in business, politics and the arts gather to try to save the planet, highlighted by a new special United Nations summit Wednesday. Many of the leaders of countries that cause the most heat-trapping carbon pollution will not be in attendance. And they won't speak at the summit organized by U.N. Secretary-General Antonio Guterres in a way that only countries that promise new concrete action are invited to speak. Organizers estimated 75,000 people marched Sunday”.

Last, several [scientific](#) findings sparked media stories this month. Among them, updated research on 'safe operating spaces' for

“From Europe to Africa to southeast Asia, tens of thousands of climate activists launched protests to call for an end to the burning of planet-warming fossil fuels as the globe suffers dramatic weather extremes and record-breaking heat.”



People take part in a Global Climate Strike 'Fridays for Future' protest in Madrid, Spain on September 15. Photo: Manu Fernandez/AP.

humanity – referred to as ‘planetary boundaries’ as well – with a focus on climate change sparked news attention. For example, [Associated Press journalist Seth Borenstein reported](#), “Earth is exceeding its “safe operating space for humanity” in six of nine key measurements of its health, and two of the remaining three are headed in the wrong direction, a new study said. Earth's climate, biodiversity, land, freshwater, nutrient pollution and “novel” chemicals (human-made compounds like microplastics and nuclear waste) are all out of whack, a group of international scientists said in Wednesday's journal *Science Advances*. Only the acidity of the oceans, the health of the air and the ozone layer are within the boundaries considered safe, and both ocean and air pollution are heading in the wrong direction, the study said. “We are in very bad shape,” said study co-author Johan Rockstrom, director of the Potsdam Institute for Climate Impact Research in Germany. “We show in this analysis that the planet is losing resilience and the patient is sick”.”

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## OCTOBER “Earth’s ‘cries of protest’”



A researcher from the Mamirauá Institute for Sustainable Development recovers dead dolphins from Lake Tete, Amazonas Brazil that has been affected by high temperatures and drought on October 2. Photo: Bruno Kelly/Reuters.



Media coverage of climate change or global warming in newspapers dropped precipitously, **down 22%** from September 2023. Coverage in October 2023 also **dropped 18%** from October 2022 levels. International wire services **decreased 15%** while radio coverage too went **down 13%** from September 2023.

October media coverage of climate change or global warming in newspapers around the globe dropped precipitously, down 22% from September 2023. Coverage in October 2023 also dipped a worrying 18% from October 2022 levels. International wire services were consistent with the trend, decreasing 15% while radio coverage too went down 13% from September 2023. Compared with September 2023, coverage was considerably down as well in all regions: Latin America (-7%), Oceania (-14%), Asia (-20%), North America (-24%), the European Union (EU) (-25%), the Middle East (-26%), and in Africa (-26%). Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through October 2023

Our 26-member team at the Media and Climate Change Observatory (MeCCO) continues to

provide three international and seven ongoing regional assessments of trends in coverage, along with 16 country-level appraisals each month. Visit our website for open-source datasets and downloadable visuals.

Moving to the content of October 2023 coverage, *scientific* findings appeared to dominate media attention. Among them, a UNICEF [report](#) entitled ‘Children Displaced, Climate Change’ garnered coverage in several outlets. For example, [Guardian journalist Nina Lakhani reported](#), “At least 43 million child displacements were linked to extreme weather events over the past six years, the equivalent of 20,000 children being forced to abandon their homes and school every single day, new research has found. Floods and storms accounted for 95% of recorded child displacement between 2016 and 2021, according to the first-of-its-kind analysis by UNICEF and the Internal Displacement Monitoring Centre (IDMC). The rest – more than

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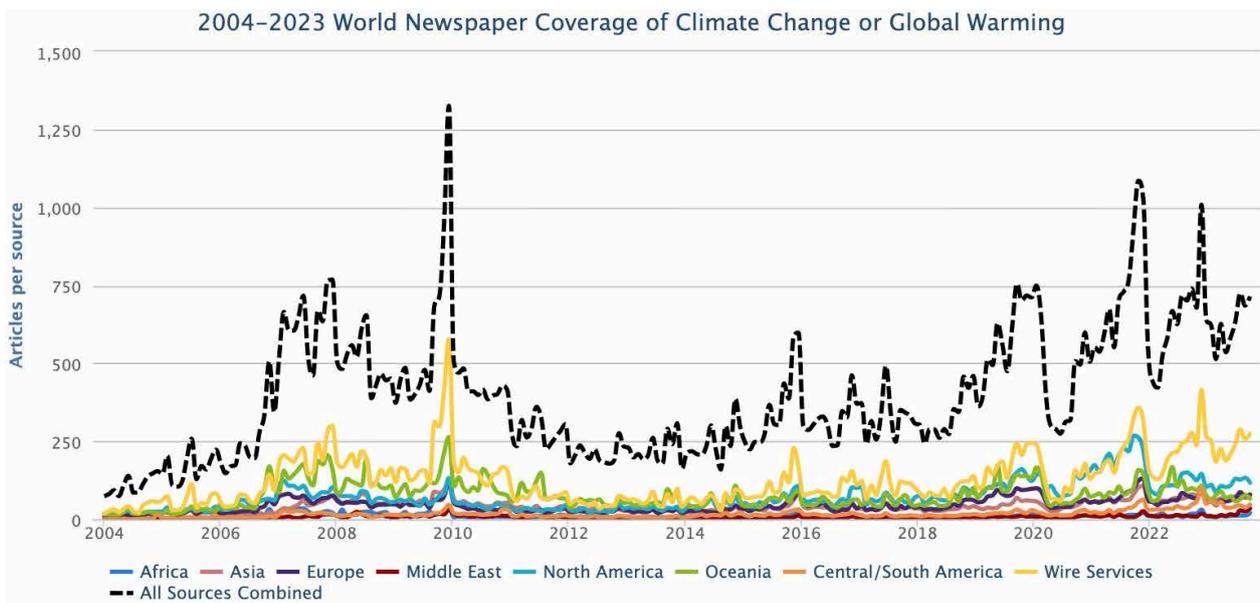


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through October 2023.

2 million children – were displaced by wildfires and drought. Displacement is traumatic and frightening regardless of age, but the consequences can be especially disruptive and damaging for children who may miss out on education, life-saving vaccines and social networks... the greatest proportion of child displacements were in small island states – many of which are facing existential threats due to the climate emergency – and in the Horn of Africa where conflict, extreme weather, poor governance and resource exploitation overlap. A staggering 76% of children were displaced in the small Caribbean island of Dominica, which was devastated by Hurricane Maria in 2017, a category 4 Atlantic storm that damaged 90% of the island’s housing stock. Storms also led to more than a quarter of children being displaced in Cuba, Vanuatu, Saint Martin and the Northern Mariana Islands. Somalia and South Sudan recorded the most child displacements due to floods, affecting 12% and 11% of the child population respectively... Children Displaced in a Changing Climate is the first global analysis of the children driven from their homes due to floods, storms, droughts and wildfires, and comes as weather-related disasters are becoming more intense, destructive and unpredictable due to fossil-fuel driven global heating. The report’s stark numbers are almost certainly an undercount due to major gaps

in reporting drought and slow onset climate impacts such as rising sea level, desertification and rising temperatures”.

Moving deeper into October, a [study from Nature Scientific Reports](#) that examined rapid intensification of Atlantic Ocean storms – with links to a changing climate – earned media coverage. For example, [Washington Post](#) journalist Ian Livingston reported, “The list of major hurricanes that rapidly intensified before hitting the United States in recent years is long and memorable: Harvey, Irma, Maria, Michael, Laura, Ida, Ian and Idalia. All of those storms, starting in 2017, developed explosively over the Atlantic Ocean. Generally, this rapid escalation is increasingly recognized as part of a global phenomenon related to climate change and its associated warming of ocean waters – but until the past couple of years, the Atlantic’s inclusion in the trend was somewhat murkier. Now, research shows that this rapid intensification is on the rise across the Atlantic basin at multiple time scales. The author of a study published Thursday, Andra Garner, an assistant professor at Rowan University in New Jersey, also highlights regions in which this intensification has become more likely, such as the western Caribbean Sea”.

As October moved along, a [Nature Climate Change study](#) finding significant Antarctic ice

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sheet loss in the coming years sparked many media accounts. For example, [USA Today journalist Doyle Rice reported](#), “The horse has left the barn. Melting of the huge West Antarctic ice sheet has apparently passed the point of no return and may be “unavoidable,” a new study reports Monday. In fact, because of human-caused climate change, the West Antarctic ice sheet will continue to increase its rate of melting over the rest of this century, no matter how much we reduce fossil fuel use, according to the study, which was published in the peer-reviewed journal *Nature Climate Change*...The ice sheet collapse is a worrying climate tipping point, experts say, because it has the potential to raise global sea level by up to 17 feet. Though the full melt would take hundreds of years, it would be enough to reshape where and how people live in the future”. Meanwhile, [Guardian environment editor Damian Carrington noted](#), “Accelerated ice melt in west Antarctica is inevitable for the rest of the century no matter how much carbon emissions are cut, research indicates. The implications for sea level rise are “dire”, scientists say, and mean some coastal cities may have to be abandoned. The ice sheet of west Antarctica would push up the oceans by 5 metres if lost completely. Previous studies have suggested it is doomed to collapse over the course of centuries, but the new study shows that even drastic emissions cuts in the coming decades will not slow the melting. The analysis shows the rate of melting of the floating ice shelves in the Amundsen Sea will be three times faster this century compared with the previous century, even if the world meets the most ambitious Paris agreement target of keeping global heating below 1.5C above pre-industrial levels. Losing the floating ice shelves means the glacial ice sheets on land are freed to slide more rapidly into the ocean. Many millions of people live in coastal cities that are vulnerable to sea level rise, from New York to Mumbai to Shanghai, and more than a third of the global population lives within 62 miles (100km) of the coast. The climate crisis is driving sea level rise by the melting of ice sheets and glaciers and the thermal expansion of sea water. The biggest uncertainty in future sea level rise

“At least **43 million child displacements** were linked to extreme weather events over the past six years, the equivalent of 20,000 children being forced to abandon their homes and school every single day.”



Children at a camp for displaced people due to Cyclone Biparjoy in Badin, Pakistan's southern district in the Sindh province in June. Photo: Fareed Khan/AP.

is what will happen in Antarctica, the scientists say, making planning to adapt to the rise very hard. Researchers said translation of the new findings on ice melting into specific estimates of sea level rise was urgently needed”.

The most abundant media coverage on this theme, however, came from the publication of a [study in \*Bioscience\*](#) that provided an updated report of the state of Earth’s changing climate in 2023. For example, [ABC News reporter Daniel Manzo noted](#), “Forecasts about the negative effects of human-caused climate change are not uncommon, but new research published Tuesday makes even more dire claims, declaring that “life on planet Earth is under siege” and that “we are pushing our planetary systems into dangerous instability.” The study, titled “The 2023 State of the Climate Report: Entering Uncharted Territory” and published in the journal *Bioscience*, points to specific climate events in 2023 to support

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its findings, including exceptional heat waves across the globe, historic and record-breaking warm ocean temperatures, and unprecedented low levels of sea ice surrounding Antarctica. The 12 international scientists who created the report indicated that in so far in 2023, there have been 38 days with global average temperatures more than 1.5 degrees Celsius above pre-industrial levels. The U.S. National Oceanic and Atmospheric Administration and Europe's Copernicus Climate Change Service earlier this month indicated that 2023 will likely go on record as the hottest year ever recorded. What's more, the highest average Earth surface temperature ever recorded was in July, according to the report, which also notes that may be the highest surface temperature the Earth has experienced in the last 100,000 years. The research team, which included scientists from the United States, Australia, Germany, Brazil, the United Kingdom, China, and the Netherlands, says that anthropogenic global heating - meaning global heating caused or amplified by humans - is the key driver in recent extreme climate events. The team also took into account that some of these events are complex and are at least partially driven by non-human factors, including water vapor effects from an underwater volcano, as well as dust from Africa, and the El Niño global climate pattern. The researchers also point to "minimal progress" by humanity to stop the impacts of anthropogenic climate change". Although the consumption of renewable energy (solar and wind) grew a robust 17% between 2021 and 2022, it remains roughly 15 times lower than fossil fuel energy consumption," the report states".

Also in October, there were several *ecological* and *meteorological* dimensions of climate change or global warming. To illustrate, droughts and floods in several places such as Brazil, Cameroon, France, Vietnam, and Myanmar - with connections made to climate change - were evident in news reporting around the world. For example, *El País* journalist Joan Royo Gual noted, "The lack of rain has caused a sharp decrease in the flow of rivers that is already affecting the supply of

drinking water and subsistence agriculture, and that threatens to leave hundreds of thousands of people living incommunicado in the most remote and vulnerable corners of Brazil. The rivers in the north of the country are like aquatic highways, practically everyone (and food, shops, medicines) moves by river. According to the authorities, more than half a million people could be affected by the shortage of water and food in the coming weeks...El Niño is partly to blame, since this climate phenomenon inhibits the formation of clouds and rain, but the scenario has been worsened by the abnormal warming of the waters of the North Atlantic, related to climate change". As a second example, *BBC News* correspondents Paul Njie and Wycliffe Muia reported, "At least 30 people have been killed in landslides caused by heavy rains in Cameroon's capital Yaoundé, the emergency services have said. A local radio station put the death toll at 40, saying that many people are still missing. Rescue efforts were hampered by floods, forcing locals to pull bodies out of the debris with their bare hands... Poverty and poor infrastructure make communities such as Mbankolo more vulnerable to extreme weather such as heavy rain, which is becoming more frequent and intense in Africa due to climate change, according to United Nations climate experts".

Ongoing heat waves and extreme high temperatures in October also contributed to news reporting on climate change in October. For example, on October 4 *Guardian* journalist Eva Corlett wrote, "After the northern hemisphere sweltered through the hottest summer in human history, New Zealand's usually cool start to spring has also hit record high temperatures that are usually reserved for its summer months. The country recorded its hottest September on record, with every region in the country experiencing above-average temperatures, with one area hitting 29.6 C. Data from the National Institute of Water and Atmospheric (NIWA) shows the nationwide average temperature was 11.9C, 1.3C warmer than the 1991-2020 September average and the hottest since records began in 1909".

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Then, on October 14 [Associated Press journalist Louise Delmott reported](#), “As Earth sweltered to its hottest Northern Hemisphere summer ever recorded, Hong Kong shared in the misery. The city, already known for oppressive humidity, endured its own record-breaking summer for heat, including August’s monthly mean temperature of 29.7 degrees Celsius (85.4 Fahrenheit). Residents spent half the month under very hot weather warnings. In the weeks since fall officially began in late September, temperatures have been slowly dropping. But the sweltering summer won’t soon be forgotten, and for many residents there is worry about future heat waves. As in so many other places, the burden of this summer’s heat often fell hardest on Hong Kong’s most vulnerable, who don’t have or can’t afford air conditioning to cope with the heat”. Meanwhile, on October 17 [Guardian correspondent Charles Pensulo wrote](#), “Malawians endured the country’s hottest weekend on record, with temperatures reaching nearly double the seasonal average. The heatwave began last Thursday with the government warning people to stay out of the sun, to keep hydrated, and avoid alcohol and caffeine. Some school buildings in the south of the country were evacuated, and children were taught in the shade of playground trees. By Saturday, parts of Malawi saw temperatures of 43C (109F), compared with an average of nearly 25C (77F) for the time of year. The temperatures had dropped by Monday, but in an advisory last week the country’s Department of Climate Change and Meteorological Services warned of a “prolonged period of hot and uncomfortable weather” throughout October. Kick-off for Malawi’s Super League football matches was delayed for 30 minutes in an attempt to avoid the worst of the heat. Players were encouraged to take regular water breaks during matches”.

As a final example of October reporting about ecological and meteorological-themed stories about climate change, hurricane Otis—a category

“Accelerated ice melt in west Antarctica is **inevitable for the rest of the century** no matter how much carbon emissions are cut, research indicates. The implications for sea level rise are “dire”, scientists say, and mean some coastal cities may have to be abandoned.”



Melting icebergs on Horseshoe island in west Antarctica. The ice sheet of west Antarctica would push up the oceans by 5 metres if lost completely. Photo: Anadolu Agency/Getty Images.

5 storm – that struck Mexico led to several news accounts that connected this event to global warming and climate change. For example, [CNN journalist Rachel Ramirez reported](#), “The rapid intensification Hurricane Otis underwent in the hours before it slammed into southern Mexico is a symptom of the human-caused climate crisis, scientists say – and one that is becoming more frequent. When it happens right before landfall, as it did with Otis, it can catch coastal communities by surprise with little time to prepare. The hurricane’s intensification was among the fastest forecasters have ever seen: its top-end windspeed increased by 115 mph in 24 hours. Only one other storm, Hurricane Patricia in 2015, exceeded Otis’ rapid intensification in East Pacific records, with a 120-mph increase in 24 hours. The term rapid intensification refers to when a storm’s winds strengthen rapidly over a short amount of time. Scientists have defined it as a wind speed increase of at least 35 mph in 24 hours or less, and it generally requires significant ocean heat.

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The National Hurricane Center said Otis strengthened so fast on Tuesday that it had “explosively intensified.” Otis “took full advantage of a warm patch of ocean” that was roughly 88 degrees Fahrenheit, said Brian McNoldy, an atmospheric scientist at the University of Miami – more than enough ocean heat to fuel a monster storm. More than 90% of warming around the globe over the past 50 years has taken place in the oceans, according to the National Oceanic and Atmospheric Administration. In addition, an El Niño is growing in the Pacific this year, driving ocean temperatures even higher”.

In terms of [cultural](#) stories relating to climate change or global warming, there were several dominant threads apparent in our ongoing monitoring work. To begin, the announcement by Pope Francis that he has plans to attend the upcoming UN COP28 and the release of his follow-up to *Laudato Si* (‘Praise Be’) with the encyclical entitled *Laudate Deum* (‘Praise God’) both catalyzed media attention. For example, [Associated Press correspondents Nicole Winfield and Seth Borenstein reported](#), “Pope Francis shamed and challenged world leaders on Wednesday to commit to binding targets to slow climate change before it’s too late, warning that God’s increasingly warming creation is fast reaching a “point of no return.” In an unusually bleak update to his landmark 2015 encyclical on the environment, Francis heightened the alarm about the “irreversible” harm to people and planet already under way and lamented that once again, the world’s poor and most vulnerable are paying the highest price. “We are now unable to halt the enormous damage we have caused. We barely have time to prevent even more tragic damage,” Francis warned. He took square aim at the United States, noting that per-capita emissions in the U.S. are twice as high as China and seven times greater than the average in poor countries”. As a second example, [reporting](#)

“Pope Francis appealed to climate change deniers and foot-dragging politicians to have a change of heart, saying they cannot gloss over its human causes or deride scientific facts while the planet **“may be nearing the breaking point”**. In *Laudate Deum* he warned against putting too much trust in technology to capture gas emissions, saying while it is promising, it does not tackle the human causes at the root of global warming.”



*Laudate Deum* (Praise God), is a follow-up to Pope Francis' 2015 encyclical on the environment. Photo: Reuters.

[from The Straits Times noted](#), “Pope Francis on Wednesday appealed to climate change deniers and foot-dragging politicians to have a change of heart, saying they cannot gloss over its human causes or deride scientific facts while the planet “may be nearing the breaking point”. In the new document, released ahead of the COP28 conference starting in November in Dubai, Pope Francis said the transition to clean, renewable energy and the abandonment of fossil fuels was not going fast enough. He warned against putting too much trust in technology to capture gas emissions, saying while it is promising, it does not tackle the human causes at the root of global warming. The 7,000-word document, called *Laudate Deum* (Praise God), is a follow-up to his 2015 encyclical on the environment, *Laudato Si* (Praise Be). It was prompted by extreme weather

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Figure 2. Examples of newspaper front pages with climate change stories in October.

events since then, which he called Earth’s ‘cries of protest’”. A third example appeared in *El País*, where journalists Lorena Pachó and Manuel Planelles wrote, “The Pope warns of the impact of the climate crisis and criticizes the slowness in abandoning fossil fuels. Bergoglio strikes down denialism in a document: “No matter how much they try to deny, hide, dissemble or relativize, the signs of climate change are there, increasingly evident” (...) the pontiff raises the tone against climate change deniers and points to the consequences of the “climate crisis”, such as the increase in the number and intensity of extreme phenomena. In addition to once again pointing out companies in the fossil fuel sector, Pope Francis is critical of the response that governments and the different climate summits are giving to this global problem. ‘The transition that is needed, towards clean energies such as wind and solar, abandoning fossil fuels, does not have the necessary speed’, maintains the Pope”.

Furthermore, there continued to be *political* and *economic*-themed media stories about climate change or global warming. To illustrate, media stories of building anticipation for the next United Nations (UN) climate negotiations (COP28) –

with a focus on upcoming decisions needed on a Loss and Damage Fund distribution plan – were pervasive. For example, *journalist Vishwa Mohan at Times of India reported*, “Ahead of the upcoming UN climate conference (COP28) in December, the Loss and Damage Transitional Committee failed to reach consensus on critical issues relating to the proposed loss and damage fund at its meeting that concluded in Aswan, Egypt. Despite negotiations going well into overtime beyond its scheduled closing day, the meeting concluded with widely divergent views on three fundamental questions: who will host the fund, which nations are eligible to get financial assistance and who must pay into the fund. The fund was created last year at COP27 in Sharm el-Sheikh, Egypt to support developing countries impacted by climate change. Idea behind this proposed fund is to help communities grappling with losses and damage from the climate change-induced extreme weather events. Differences between developed and developing countries on these questions have potential to derail one of the key deliverables of the COP28 where the negotiators are expected to take the final call on operationalizing the fund”.

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## NOVEMBER “None of this is inevitable”



A resident of Rocinha carrying water collected from a natural spring during a heat wave in Rio de Janeiro, Brazil, on November 17, 2023. Photo: Tercio Teixeira/AFP/Getty Images.



Media coverage of climate change or global warming **increased 21%** from October 2023. Coverage in November 2023 **dropped 41%** from November 2022 levels. In November 2023, international wire services **increased 30%** from the previous month, while radio coverage **increased 13%** from October 2023.

**N**ovember media coverage of climate change or global warming in newspapers around the globe increased 21% from October 2023. However, coverage in November 2023 dropped 41% from November 2022 levels. This is largely attributed to attention paid in November 2022 to the United Nations (UN) climate negotiations (COP27) in Sharm el-Sheikh Egypt, while the UN climate negotiations in 2023 just began November 30 (COP28) in Dubai, United Arab Emirates. In November 2023, international wire services increased 30% from the previous month, while radio coverage went up 13% from October 2023. Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through November 2023.

Compared with the preceding month, coverage increased in Asia (+7%), the European Union (EU) (+8%), Africa (+21%), North America (+23%),

and Oceania (+28%). Meanwhile, November coverage decreased in Latin America (-3%), and in the Middle East (-21%) (see Figure 2) on the precipice of the opening of COP28 in Dubai.

Our 26-member team at the Media and Climate Change Observatory (MeCCO) continues to provide three international and seven ongoing regional assessments of trends in coverage, along with 16 country-level appraisals each month. Visit our website for open-source datasets and downloadable visuals.

Moving to themes within analysis of content during the month, many *political* and *economic*-themed media stories about climate change or global warming populated the ‘news hole’ in October. To illustrate, in early November the United Nations Environment Programme (UNEP) released its annual Adaptation Gap report. The main finding – that financial support is lacking to help those in need to adapt to

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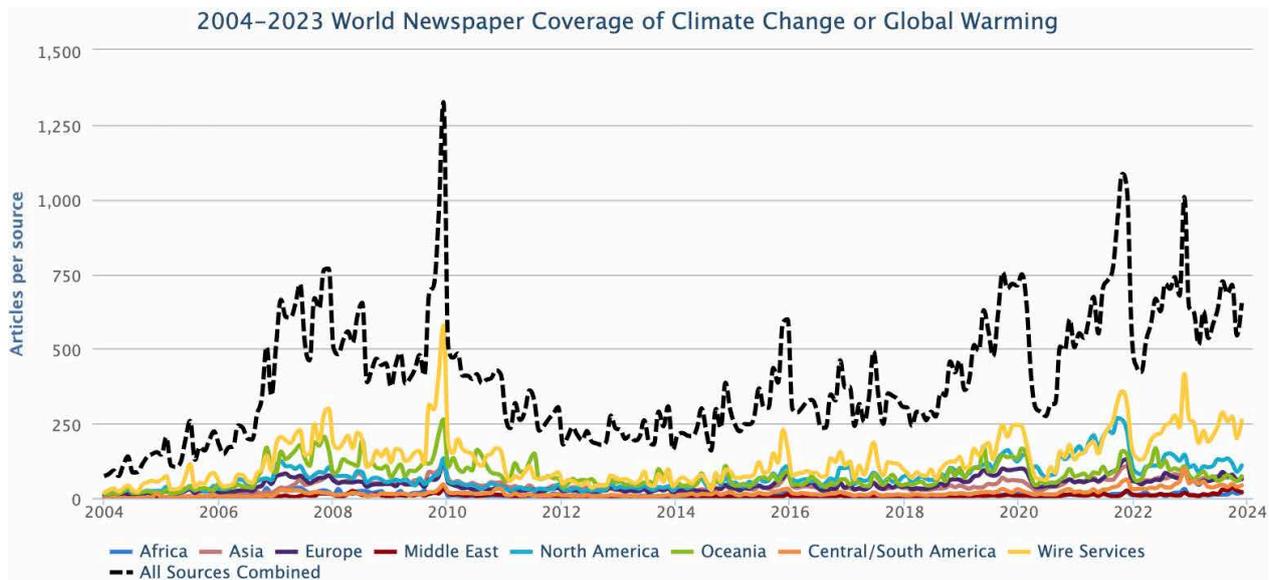


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through November 2023.

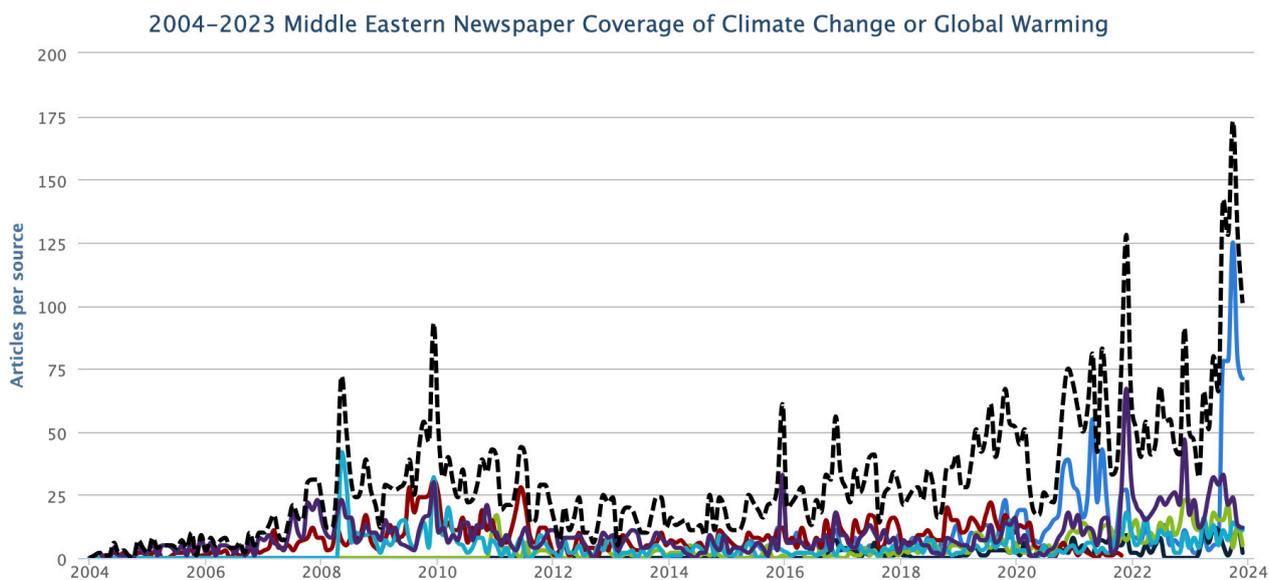


Figure 2. Newspaper coverage of climate change or global warming in Middle East outlets from January 2004 through November 2023.

human-caused climate change – generated many headlines and news stories. For example, [Washington Post journalist Maxine Joselow reported](#), “As climate change makes extreme weather events more intense and frequent, the world must spend hundreds of billions more a year – 10 to 18 times more than it currently spends – helping vulnerable people adapt to mounting devastation, United Nations experts said Thursday. The warning comes as millions of people suffer amid severe droughts, catastrophic wildfires and ruinous floods fueled by rising global temperatures. It also comes

less than a month before the next U.N. Climate Change Conference, hosted this year in Dubai, where negotiators from wealthy countries are expected to resist calls to compensate poor nations for such deadly disasters”.

Also in early November, another report from UNEP outlined how coal, oil and gas extraction plans flew in the face of work to alleviate the negative impacts of a changing climate. This made news. For example, [Associated Press correspondent Jennifer McDermott reported](#), “Despite frequent and devastating heat waves,

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droughts, floods and fire, major fossil fuel-producing countries still plan to extract more than double the amount of fossil fuels in 2030 than is consistent with the Paris climate accord's goal for limiting global temperature rise, according to a United Nations-backed study released Wednesday. Coal production needs to ramp sharply down to address climate change, but government plans and projections would lead to increases in global production until 2030, and in global oil and gas production until at least 2050, the Production Gap Report states. This conflicts with government commitments under the climate accord, which seeks to keep global temperature rise below 1.5 degrees Celsius (2.7 degrees Fahrenheit). The report examines the disparity between climate goals and fossil fuel extraction plans, a gap that has remained largely unchanged since it was first quantified in 2019.

"Governments' plans to expand fossil fuel production are undermining the energy transition needed to achieve net-zero emissions, creating economic risks and throwing humanity's future into question," Inger Andersen, executive director of the United Nations Environment Programme, said in a statement. As world leaders convene for another round of United Nations climate talks at the end of the month in Dubai, seeking to curb greenhouse gases, Andersen said nations must "unite behind a managed and equitable phase-out of coal, oil and gas – to ease the turbulence ahead and benefit every person on this planet." The report is produced by the Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development, and UNEP. They say countries should aim for a near-total phase-out of coal production and use by 2040 and a combined reduction in oil and gas production and use by three-quarters by 2050 from 2020 levels, at a minimum. But instead, the analysis found that in aggregate, governments plan to produce about 110% more fossil fuels in

"Australia has offered refuge to citizens of Tuvalu because of the catastrophic impacts of climate change, in a landmark new pact. Tuvalu is among the nations most at risk from rising seas. It is the first time Australia has offered residency to foreign nationals because of the threat of climate change."



Aerial shot of the Funafuti atoll on Tuvalu showing the impact of rising sea levels. Photo: Sean Gallagher.

2030 than what's needed to limit warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit), and 69% more than would be consistent with the less protective goal of 2 degrees Celsius (3.6 degrees Fahrenheit). These global discrepancies increase even more toward 2050".

As November wore on, news was generated by the announcement from the Australian government that they would offer residency-as-refuge to Tuvaluans due to climate-related rising sea levels. For example, [BBC correspondent Tiffanie Turnbull reported](#), "Australia has offered refuge to citizens of Tuvalu because of the catastrophic impacts of climate change, in a landmark new pact. Tuvalu - a series of low-lying atolls in the Pacific - is among the nations most at risk from rising seas. It is home to 11,200 people and has repeatedly called for greater action to combat climate change. Australian Prime Minister Anthony Albanese described it as a "ground-breaking" agreement. Tuvalu Prime Minister Kausea Natano called it "a beacon of hope" and "not just a milestone but a giant leap

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forward in our joint mission to ensure regional stability, sustainability and prosperity". Up to 280 people per year will be granted the new visas, which will allow them to live, work and study in Australia. It is the first time Australia has offered residency to foreign nationals because of the threat of climate change, the Australian Broadcasting Corporation reported".

In the EU, an emergent agreement to regulate and reduce methane emissions – designed to prompt countries like the US, Singapore, China and Russia to examine methane emissions in their supply chains – earned media attention. For example, *Wall Street Journal* correspondent **Fabiana Negrin Ochoa** noted, "The European Union has taken a step toward curbing methane emissions, agreeing on new rules aimed at cutting the amounts of the potent greenhouse gas produced in the energy sector. The EU Council and Parliament reached a provisional deal early Wednesday on regulation to track and reduce emissions of methane, thought to be responsible for a third of current global warming, the council said in a statement. The rules would require oil, gas and coal companies to measure, report and verify methane emissions, the statement said. They would also need to have mitigation measures in place to avoid emissions. Implementation would be phased, with operators submitting reports quantifying emissions within specific time frames once the regulations take effect. The measures also take aim at finding and repairing sources of methane leaks and other unintentional emissions, and ensuring that plugged or inactive wells aren't contributing to the problem. Authorities will carry out periodic checks to verify compliance, the statement said. Imports of fossil fuels into the EU also fall under the scope of the new regulations. Exporters would need to comply with monitoring, reporting and verification measures by Jan. 1, 2027, and maximum methane intensity values by 2030. The next step for the new rules: being endorsed and formally adopted by the council and parliament. Curbing methane emissions is a key part of a legislative package to implement the European Green Deal, aimed at reaching climate neutrality by

2050. A climate-neutral economy is one with net-zero greenhouse-gas emissions. According to the International Energy Agency, oil, gas and coal-mining operations release large amounts of the potent greenhouse gas, either by accident or design. It estimates that the energy sector is responsible for nearly 40% of total methane emissions attributable to human activity, second only to agriculture".

Moving to *scientific*-related themes in coverage, there were many examples that earned media attention in November. Among them, a study – with findings that sparked some discussion and disagreement among fellow relevant expert scientists – by former NASA Goddard Institute for Space Studies Director James Hansen and colleagues got media attention. For example, *New York Times* journalist **Delger Erdenesanaa** wrote, "Global warming may be happening more quickly than previously thought, according to a new study by a group of researchers including former NASA scientist James Hansen, whose testimony before Congress 35 years ago helped raise broad awareness of climate change. The study warns that the planet could exceed 1.5 degrees Celsius, or 2.7 degrees Fahrenheit, of warming this decade, compared with the average temperature in preindustrial days, and that the world will warm by 2 degrees Celsius by 2050. When countries signed the landmark Paris Agreement in 2015 to collectively fight climate change, they agreed to try and limit global warming to "well below" 2 degrees Celsius and aim for 1.5 degrees. "The 1.5 degree limit is deader than a doornail," said Dr. Hansen, now the director of the Climate Science, Awareness and Solutions Program at Columbia University, during a news conference on Thursday. The 2 degrees goal could still be met, he said, but only with concerted action to stop using fossil fuels and at a pace far quicker than current plans. The world has warmed by about 1.2 degrees Celsius so far and is already experiencing worsening heat waves, wildfires, storms, biodiversity loss and other consequences of climate change. Past the Paris Agreement temperature goals, which reflect the results of international diplomacy rather than exact scientific benchmarks, the

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effects will get significantly worse and veer into territory with greater extremes and unknowns. Experts generally don't quibble over the finding that the planet will soon pass 1.5 degrees of warming. A separate study published on Monday by British and Austrian scientists similarly found that, at our current rate of burning fossil fuels, the world would be committed to passing 1.5 degrees of warming within six years...So far, humans have increased the amount of carbon dioxide in the atmosphere by about 50 percent, from 280 parts per million in the 1700s to 417 parts per million in 2022 – resulting in a relatively linear temperature increase over time. But Dr. Hansen believes warming is accelerating. One reason, he said, is a successful reduction in sulfate aerosols in the atmosphere as countries and industries, especially shipping, have cracked down on air pollution in recent years. Different pollutants have different effects in the atmosphere. Sulfate aerosols, another byproduct of burning fossil fuels, reflect sunlight away from the surface of the Earth and help cool the planet slightly. Other prominent climate scientists, including Michael Mann at the University of Pennsylvania, who published a rebuttal of the new study, disagree that climate change is accelerating. Despite these disagreements, the very real, physical deadlines of 1.5 and 2 degrees Celsius are looming close enough on the horizon that, to a certain extent, exactly how sensitive the Earth's climate is to future greenhouse gas emissions doesn't matter. Most experts agree that while the 1.5 degree goal has already been missed, 2 degrees is still salvageable – but not without much more action than countries are currently taking”.

Moving into mid-November, the 5<sup>th</sup> US National Climate Assessment Report release earned media attention from many outlets across the US, and some internationally. For example, [Associated Press correspondents Seth Borenstein and Tammy Webber reported,](#)

“Anyone who willfully denies the impact of climate change is condemning the American people to a very dangerous future. **Impacts are only going to get worse**, more frequent, more ferocious and more costly,” Biden said, noting that disasters cost the country \$178 billion last year. “None of this is inevitable.””



A structure is engulfed in flames as a wildfire called the Highland Fire burns in Aguanga, California on October 30. Photo: AP/Ethan Swope.

“Revved-up climate change now permeates Americans’ daily lives with harm that is “already far-reaching and worsening across every region of the United States,” a massive new government report says. The National Climate Assessment, which comes out every four to five years, was released Tuesday with details that bring climate change’s impacts down to a local level. Unveiling the report at the White House, President Joe Biden blasted Republican legislators and his predecessor for disputing global warming. “Anyone who willfully denies the impact of climate change is condemning the American people to a very dangerous future. Impacts are only going to get worse, more frequent, more ferocious and more costly,” Biden said, noting that disasters cost the country \$178 billion last year. “None of this is inevitable.” Overall, Tuesday’s assessment paints a picture of a country warming about 60% faster than the world as a whole, one that regularly gets smacked with costly weather disasters and faces even bigger problems in the future”.

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Also in mid-November, findings from the latest annual *Lancet Countdown on Health and Climate Change assessment* - with two MeCCO team members (*Lucy McAllister and Olivia Pearman*) as co-authors - generated substantial media coverage. For example, **CNN journalist Rachel Ramirez reported**, "The climate crisis is carrying a mounting health toll that is set to put even more lives at risk without bold action to phase out planet-warming fossil fuels, a new report from more than 100 scientists and health practitioners found. The annual Lancet Countdown report, released Tuesday, found that delaying climate action will lead to a nearly five-fold increase in heat-related deaths by 2050, underscoring that the health of humans around the world is "at the mercy of fossil fuels." Despite these growing health hazards and the costs of adapting to climate change soaring, authors say governments, banks and companies are still allowing the use of fossil fuels to expand and harm human health".

Later in November, a new installment of the **United Nations (UN) Emissions Gap report** earned media coverage in many outlets. For example, **Hindustan Times reporter Jayashree Nandi wrote**, "97 nations covering approximately 81% of global greenhouse gas emissions had adopted net-zero pledges either in law (27 countries) or in a policy document (54 countries). All G20 members except Mexico have set net-zero targets, but overall net-zero goals do not inspire confidence, the report said. Net-zero is a target of completely negating the amount of greenhouse gases produced by human activity to be achieved by reducing emissions and implementing methods of absorbing carbon dioxide from the atmosphere. Limited progress has been made on key indicators of confidence in net-zero implementation among G20 members, including legal status, existence and quality of implementation plans and alignment of near-term emissions trajectories, the report pointed out. None of the G20 nations, which include India, are currently reducing emissions at a pace consistent with meeting their net-zero targets, it added. The UNEP called on all nations to deliver economy-wide, low-carbon development. Coal, oil and gas extracted over

the lifetime of producing and planned mines and fields would emit over 3.5 times the carbon budget available to limit warming to 1.5 degrees Celsius, and almost the entire budget available for 2 degrees of warming, the thresholds agreed upon by all countries in the Paris agreement. "The low-carbon development transition poses economic and institutional challenges for low and middle-income countries, but also provides significant opportunities. Transitions in such countries can help to provide universal access to energy, lift millions out of poverty and expand strategic industries," the UNEP report said. "The associated energy growth can be met efficiently and equitably with low-carbon energy as renewables get cheaper, ensuring green jobs and cleaner air." International financial assistance will have to be significantly scaled up, with new public and private sources of capital restructured through financing mechanisms for such a transition, the UNEP said".

In late November, there was significant news attention paid to the European Copernicus Climate Change Service, who found that the Earth has warmed about 3.6°F (2°C) since the industrial revolution. As this corresponds with the UN Paris Agreement limit, it garnered concern in the public arena. For example, **CNN correspondents Angela Dewan and Laura Paddison noted**, "The Earth's temperature briefly rose above a crucial threshold that scientists have been warning for decades could have catastrophic and irreversible impacts on the planet and its ecosystems, data shared by a prominent climate scientist shows. For the first time, the global average temperature on Friday last week was more than 2 degrees Celsius hotter than levels before industrialization, according to preliminary data shared on X by Samantha Burgess, deputy director of the Copernicus Climate Change Service, based in Europe. The threshold was crossed just temporarily and does not mean that the world is at a permanent state of warming above 2 degrees, but it is a symptom of a planet getting steadily hotter and hotter, and moving towards a longer-term situation where climate crisis impacts will be difficult – in some cases impossible – to reverse".

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Also, several *cultural*-themed stories relating to climate change or global warming bubbled up during the month of November. Among them, an Oxfam report about wealth inequality relating to vastly different emissions contributions gained attention in the high-consuming regions of the EU and North America. For example, *Washington Post* journalist [Kelly Kasulis Cho](#) reported, “The world’s richest 1 percent generated as much carbon emissions as the poorest two-thirds in 2019, according to a new Oxfam report that examines the uber-wealthy’s lavish lifestyles and investments in heavily polluting industries. The report paints a grave portrait as climate experts and activists scramble to curtail global warming that is devastating vulnerable and often poor communities in Southeast Asia, East Africa and elsewhere. This month marked a long-dreaded milestone for the planet, when scientists recorded an average global temperature that was more than 2 degrees Celsius above preindustrial levels on Friday. “The super-rich are plundering and polluting the planet to the point of destruction, leaving humanity choking on extreme heat, floods and drought,” Oxfam International’s interim executive director, Amitabh Behar, said in a news release on Monday. He called for world leaders to “end the era of extreme wealth.” According to Oxfam’s report, carbon emissions of the world’s richest 1 percent surpassed the amount generated by all car and road transport globally in 2019, while the richest 10 percent accounted for half of global carbon emissions that year. Meanwhile, emissions from the richest 1 percent are enough to cancel out the work of nearly 1 million wind turbines each year, Oxfam said. “None of this is surprising, but, you know, it’s crucial,” said David Schlosberg, director of the Sydney Environment Institute at the University of Sydney...According to the Oxfam report, which calls for a new wave of taxes on corporations and billionaires, “a 60 percent tax on the incomes of the richest 1 percent would

“Carbon emissions of the world’s richest 1 percent surpassed the amount generated by all car and road transport globally in 2019, while the richest 10 percent accounted for half of global carbon emissions that year. **Emissions from the richest 1 percent are enough to cancel out the work of nearly 1 million wind turbines each year.**”



Climate activists of Extinction Rebellion hold a protest action against private jets at the ExecuJet Aviation Group, near the Brussels Airport. Photo: Nicolas Maeterlinck/Belga Mag/AFP via Getty Images.

cut emissions by more than the total emissions of the UK and raise \$6.4 trillion a year to pay for the transition away from fossil fuels to renewable energy.” Some in recent years have also floated the idea of taxing high-carbon-emissions behavior, such as the purchase or use of private jets, yachts and high-end fossil fuel cars.” Meanwhile, in Rio de Janeiro, Brazil the tragic heat-related death of a Taylor Swift enthusiast gave rise to several media stories making connections between the concert conditions and global warming. For example, *US National Public Radio* correspondent [Alejandra Borunda](#) reported, “Springtime is underway in the southern Hemisphere, but across much of South America it has felt like the depths of summer for months already. A string of heat waves have settled in over the region, pushing temperatures into record-breaking territory month after month. Last week, temperatures soared in southern Brazil. In Rio de Janeiro, a

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Figure 3. Examples of newspaper front pages with climate change stories in November.

city of nearly 12 million people, intense heat and humidity pushed a 23-year-old Brazilian university student into cardiac arrest at a Taylor Swift concert. Fans had stood in line for the Eras Tour at the Nilton Santos Olympic stadium in brutally hot, humid, windless conditions for hours before the Friday night show. It was just as hot and steamy inside the venue, concertgoers reported. The woman who died, Ana Clara Benevides Machado, got medical attention from paramedics at the concert venue, but died later at a nearby hospital. Rio's temperatures last week topped 100 F. But the heat index—a measure that takes into account both air temperature and humidity—made it feel like it was nearly 140 degrees Fahrenheit. People can only handle heat like that for a few

hours before they start to get sick—or even die. Brazil's Ministry of Culture noted the extreme, dangerous heat in a statement expressing condolences for Machado's death. This is a clear signal that climate change, the ministry said, has to be considered a major risk for events like big concerts or other cultural events now. Swift postponed a concert planned for Saturday night, another day that was supposed to be dangerously hot". Meanwhile, *Guardian* journalist Constance Malleret noted, "In Brazil, a tropical country whose famed Carnival celebrations are held at the peak of summer, hot weather is not usually considered an obstacle to music events. "For Brazilians, the heat is part of our identity construction ... We're a country that deals well with heat, we're proud of that,"

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said Nubia Armond, a geographer at Indiana University Bloomington. But the death of a young woman during a Taylor Swift concert held amid a scorching heatwave in Rio de Janeiro has brought into sharp focus the dangers of extreme heat – and how music events will be forced to adapt to the era of global boiling”.

Finally, in November there were several **ecological** and **meteorological** dimensions of climate change or global warming. To illustrate, flooding in Eastern Africa – with links to a changing climate – generated media stories across the world. For example, **BBC journalist Danai Nesta Kupemba reported**, “At least 14 people have died because of flooding triggered by heavy rains in Somalia and thousands remain trapped. The flooding began last month as water levels in the Juba and Shabelle rivers began to rise, causing them to overflow. More than 47,000 people have fled their homes, the United Nations humanitarian affairs agency (OCHA) says. In Luuq district, 2,400 people are stuck in their own homes surrounded by water. Bridges and roads have been destroyed by the downpours, making it difficult to reach affected households. A number of toilets are overflowing into residential areas, raising the risks of water-borne diseases... El Niño is caused by the Pacific Ocean warming and is linked to flooding, cyclones, drought, and wildfires. Many factors contribute to flooding, but a warming atmosphere caused by climate change makes extreme rainfall more likely. The world has already warmed by about 1.1°C since the industrial era began and temperatures will keep rising unless governments around the world make steep cuts to emissions”.

Also in November, Brazil suffered an unprecedented heat wave, and that generated news attention. For example, **El País journalist Juan Royo Gual noted**, “Heat waves in Brazil are becoming more frequent, as demonstrated by a study recently published by the Ministry of Science and Technology. The number of days a year with record temperatures has multiplied rapidly in 20 years. Between 1961 and 1990 it was something very exceptional, a maximum of seven days a year. Between 2011 and 2020,

“For Brazilians, the heat is part of our identity construction. But the death of a young woman during a Taylor Swift concert held amid a scorching heatwave in Rio de Janeiro has brought into sharp focus the dangers of extreme heat – and how music events will be forced to adapt to the era of global boiling.”



A firefighter cools off Taylor Swift concertgoers at the Nilton Santos Olympic Stadium. Photo: T. Teixeira/AFP.

there was an average of 56 days of extreme heat (...) The first major heat wave of the season occurred with more than a month to go before the arrival of summer. An unprecedented wave in extension and duration. On the map of the National Institute of Meteorology (Inmet), two thirds of Brazil’s territory appear painted orange and red, the colors for “danger” and “great danger.” In this last category it is understood that there is a “high probability of damage and accidents, with risk to physical integrity or even human life,” according to the agency. A total of 1,413 municipalities in 13 states, among a total of about 5,000 municipalities, are in the risk zone, which is activated when temperatures reach five degrees above average for several consecutive days. Simultaneously, heavy rains are expected in the south.”

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## DECEMBER “A climate action lifeline, not a finish line”



United Nations Climate Chief Simon Stiell, right, and COP28 President Sultan al-Jaber embrace at the COP28 UN Climate Summit in Dubai, United Arab Emirates. Photo: K. Jebreili/AP.



Media coverage of climate change or global warming **decreased 1%** from November 2023. However, coverage in December 2023 went **up 3%** from December 2022 levels. In December 2023 international wire services **dipped 18%** from the previous month, while radio coverage **went up 39%** from December 2023.

**D**ecember media coverage of climate change or global warming in newspapers around the globe decreased 1% from November 2023. However, coverage in December 2023 went up 3% from December 2022 levels. Of particular note, in December 2023 international wire services dipped 18% from the previous month, while radio coverage went up 39% from December 2023.

Figure 1 shows trends in newspaper media coverage at the global scale – organized into seven geographical regions around the world – from January 2004 through December 2023. This composite now represents 20 years of our monitoring.

At the regional level, December 2023 coverage increased in Asia (+17%), the European Union (EU) (+5%) [see Figure 2] compared to the previous month of November. Yet, December coverage decreased in in the Middle East (-3%), Latin America (-8%), Oceania (-10%), North America (-13%), and Africa (-24%). These

regional decreases appeared despite news surrounding the UN climate negotiations in 2023 (COP28) in Dubai, United Arab Emirates through December 12.

Our dynamic team at the Media and Climate Change Observatory (MeCCO) continues to provide three international and seven ongoing regional assessments of trends in coverage, along with 16 country-level appraisals each month. Visit our website for open-source datasets and downloadable visuals.

Moving to the content of these stories, many *political* and *economic*-themed media stories about climate change or global warming dominated overall coverage this month. Most prominently, there were many news stories about the United Nations (UN) Conference of Parties (COP28) climate negotiations that were undertaken in the first two weeks of December in Dubai, United Arab Emirates. For example, *New York Times* correspondent [Lisa Friedman](#)

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2004–2022 World Newspaper Coverage of Climate Change or Global Warming

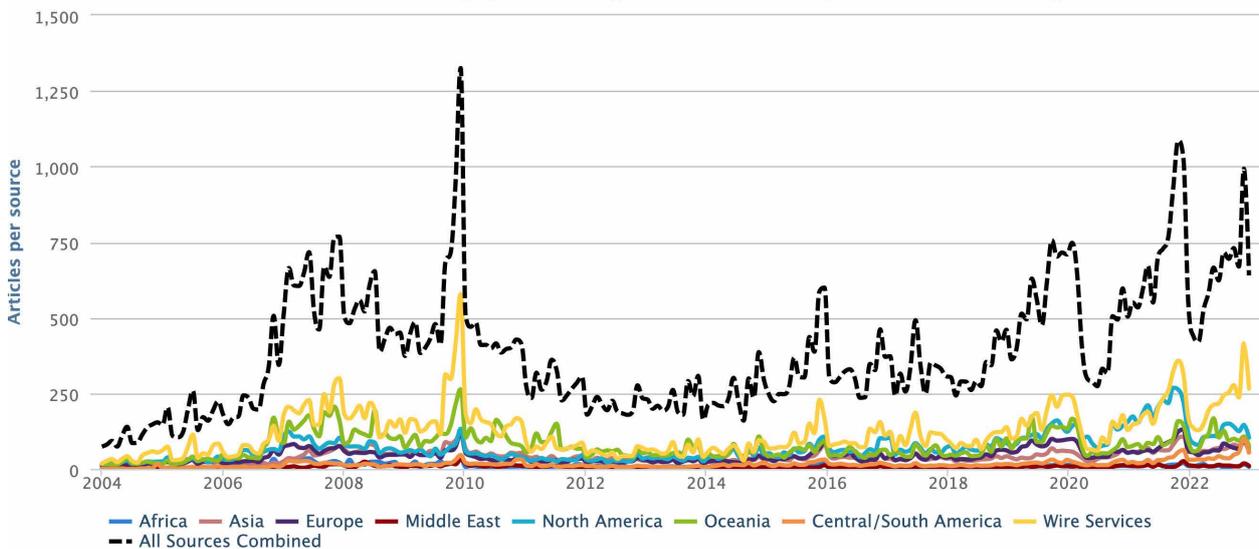


Figure 1. Newspaper media coverage of climate change or global warming in print sources in seven different regions around the world, from January 2004 through December 2023.

reported, “A new fund to help vulnerable countries hit by climate disasters should be up and running this year, after diplomats from nearly 200 countries on Thursday approved a draft plan on the first day of a United Nations global warming summit. The early adoption of rules for the fund, which developing nations fought more than 30 years to create, was widely viewed as a positive sign for the two-week summit in Dubai. Sultan Al Jaber, the Emirati oil executive who is presiding over the conference, called the move a “significant milestone” and evidence that nations were ready to act with ambition on climate. The United Arab Emirates and Germany each pledged \$100 million toward the fund and the United Kingdom pledged about \$76 million. Japan pledged \$10 million. The European Union would contribute at least €225 million (about \$245 million), Wopke Hoekstra, the E.U. climate commissioner, said on X, the social media platform formerly known as Twitter. The United States promised \$17.5 million, an amount that some activists criticized as too low for the world’s largest economy and biggest historic source of greenhouse gases”. Meanwhile, **BBC correspondent Matt McGrath noted**, “In a surprise that has lit up COP28, delegates have agreed to launch a long-awaited fund to pay for damage from climate-driven storms and drought.

Such deals are normally sealed last minute after days of negotiations. COP28 president Sultan

al-Jaber shook up the meeting by bringing the decision to the floor on day one. The EU, UK, US and others immediately announced contributions totalling around \$400m for poor countries reeling from the impacts of climate change. It’s hoped the deal will provide the momentum for an ambitious wider agreement on action during the summit. The stakes for that couldn’t be higher: the day began with stark warnings from the UN chief that “we are living through climate collapse in real time”. António Guterres said the news that it’s “virtually certain” 2023 will be the hottest year on record should “send shivers down the spines of world leaders”.

Also, previous comments by COP28 president and ADNOC CEO Sultan Al Jaber made their way into the public sphere via news reporting in early December. While this comment was actually uttered in a public-facing Zoom conversation with past Irish President Mary Robinson in late November, this generated media attention in the first days of the UN climate negotiations (COP28). For example, **Guardian journalists Damien Carrington and Ben Stockton wrote**, “The president of Cop28, Sultan Al Jaber, has claimed there is “no science” indicating that a phase-out of fossil fuels is needed to restrict global heating to 1.5C, the Guardian and the Centre for Climate Reporting can reveal. Al Jaber also said a phase-out of fossil fuels would not allow sustainable

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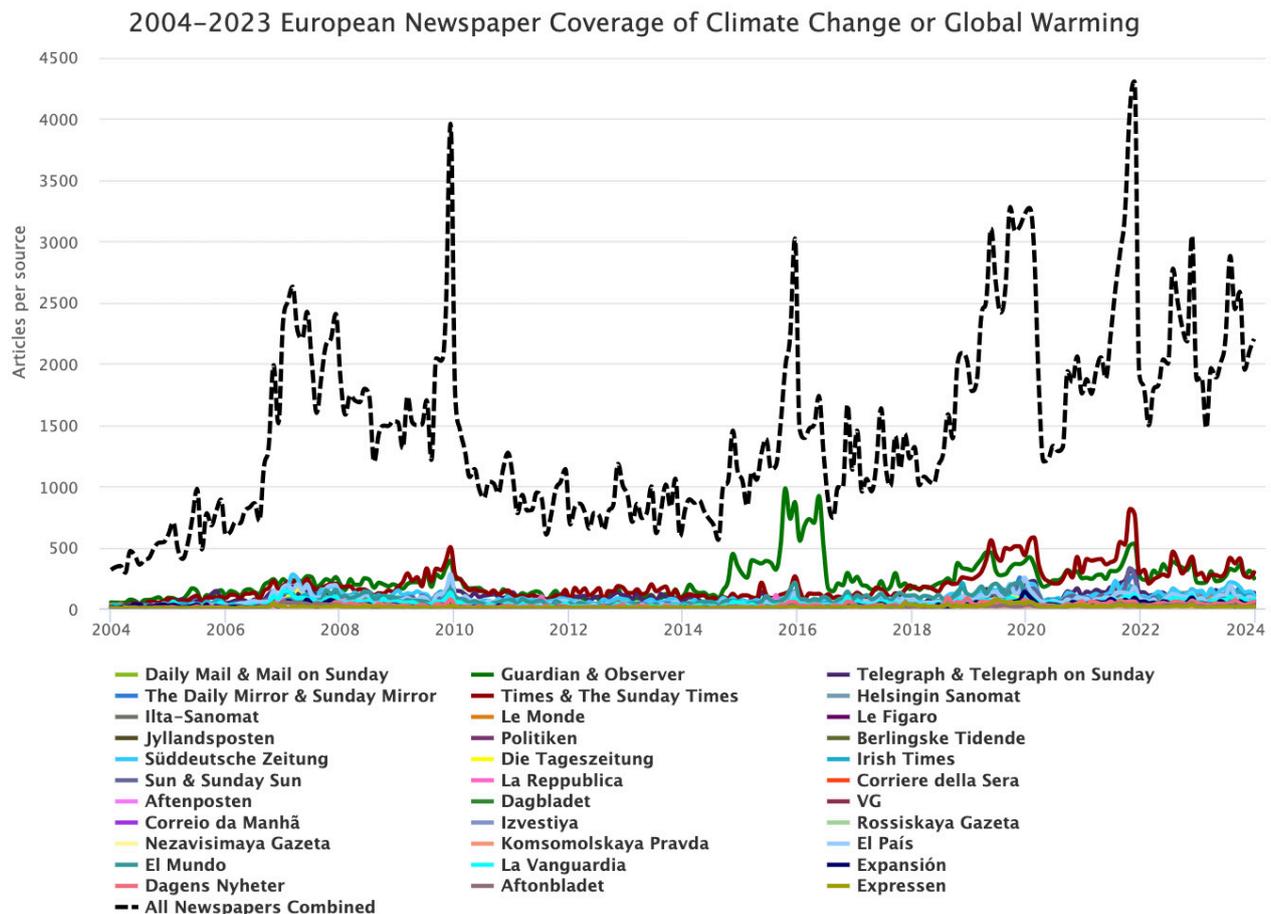


Figure 2. Newspaper coverage of climate change or global warming in European Union newspapers from January 2004 through December 2023.

development “unless you want to take the world back into caves”. The comments were “incredibly concerning” and “verging on climate denial”, scientists said, and they were at odds with the position of the UN secretary general, António Guterres. Al Jaber made the comments in ill-tempered responses to questions from Mary Robinson, the chair of the Elders group and a former UN special envoy for climate change, during a live online event on 21 December. As well as running Cop28 in Dubai, Al Jaber is also the chief executive of the United Arab Emirates’ state oil company, Adnoc, which many observers see as a serious conflict of interest. More than 100 countries already support a phase-out of fossil fuels and whether the final Cop28 agreement calls for this or uses weaker language such as “phase-down” is one of the most fiercely fought issues at the summit and may be the key determinant of its success. Deep and rapid cuts are needed to bring fossil fuel emissions to zero and limit fast-worsening climate impacts. Al Jaber spoke

with Robinson at a She Changes Climate event. Robinson said: “We’re in an absolute crisis that is hurting women and children more than anyone ... and it’s because we have not yet committed to phasing out fossil fuel. That is the one decision that Cop28 can take and in many ways, because you’re head of Adnoc, you could actually take it with more credibility.” Al Jaber said: “I accepted to come to this meeting to have a sober and mature conversation. I’m not in any way signing up to any discussion that is alarmist. There is no science out there, or no scenario out there, that says that the phase-out of fossil fuel is what’s going to achieve 1.5C.” Robinson challenged him further, saying: “I read that your company is investing in a lot more fossil fuel in the future.” Al Jaber responded: “You’re reading your own media, which is biased and wrong. I am telling you I am the man in charge.” Al Jaber then said: “Please help me, show me the roadmap for a phase-out of fossil fuel that will allow for sustainable socioeconomic development, unless you want to take the world

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back into caves.” “I don’t think [you] will be able to help solve the climate problem by pointing fingers or contributing to the polarisation and the divide that is already happening in the world. Show me the solutions. Stop the pointing of fingers. Stop it,” Al Jaber said. Guterres told Cop28 delegates on Friday: “The science is clear: The 1.5C limit is only possible if we ultimately stop burning all fossil fuels. Not reduce, not abate. Phase out, with a clear timeframe.” Bill Hare, the chief executive of Climate Analytics, said: “This is an extraordinary, revealing, worrying and belligerent exchange. ‘Sending us back to caves’ is the oldest of fossil fuel industry tropes: it’s verging on climate denial.”

Among stories emerging from COP28, there was a great deal of attention paid to what was going into (and what was going to be left out of) the Dubai agreement among 198 parties to the UN. For example, [Associated Press journalists Sibi Arasu and Seth Borenstein reported](#), “After days of shaving off the edges of key warming issues, climate negotiators Tuesday zeroed in on the tough job of dealing with the main cause of what’s overheating the planet: fossil fuels. As scientists, activists and United Nations officials repeatedly detailed how the world needs to phase-out the use of coal, oil and natural gas, the United Arab Emirates-hosted conference opened “energy transition day” with a session headlined by top officials of two oil companies. Negotiators produced a new draft of what’s expected to be the core document of the U.N. talks, something called the Global Stocktake, but it had so many possibilities in its 24-pages that it didn’t give too much of a hint of what will be agreed upon when the session ends next week. Whatever is adopted has to be agreed on by consensus so it has to be near unanimous. “It’s pretty comprehensive,” COP28 CEO Adnan Amin told The Associated Press Tuesday. “I think it provides a very good basis for moving forward. And what we’re particularly pleased about it is that it’s this early in the process”.”

As COP28 wrapped in mid-December, many news accounts sought to help understand the various agreements that were made. For

example, [Associated Press journalists Seth Borenstein, David Keyton, Jamey Keaten and Sibi Arasu reported](#), “Nearly 200 countries agreed Wednesday to move away from planet-warming fossil fuels – the first time they’ve made that crucial pledge in decades of U.N. climate talks though many warned the deal still had significant shortcomings. The agreement was approved without the floor fight many feared and is stronger than a draft floated earlier in the week that angered several nations. But it didn’t call for an outright phasing out of oil, gas and coal, and it gives nations significant wiggle room in their “transition” away from those fuels. “Humanity has finally done what is long, long, long overdue,” Wopke Hoekstra, European Union commissioner for climate action, said as the COP28 summit wrapped up in Dubai. Within minutes of opening Wednesday’s session, COP28 President Sultan al-Jaber gavelled in approval of the central document – an evaluation of how off-track the world is on climate and how to get back on – without giving critics a chance to comment. He hailed it as a “historic package to accelerate climate action.” The document is the central part of the 2015 Paris accord and its internationally agreed-upon goal to try to limit warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit) above pre-industrial times. The goal is mentioned 13 times in the document and al-Jaber repeatedly called that his “North Star.” So far, the world has warmed 1.2 degrees (2.2 degrees Fahrenheit) since the mid 1800s. Scientists say this year is all but certain to be the hottest on record. Several minutes after al-Jaber rammed the document through, Samoa’s lead delegate Anne Rasmussen, on behalf of small island nations, complained that they weren’t even in the room when al-Jaber said the deal was done. She said that “the course correction that is needed has not been secured,” with the deal representing business-as-usual instead of exponential emissions-cutting efforts. She said the deal could “potentially take us backward rather than forward.” When Rasmussen finished, delegates whooped, applauded and stood, as al-Jaber frowned, eventually joining the standing ovation that stretched longer than his plaudits. Marshall Islands delegates hugged and cried.

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### A Review of Media Coverage of Climate Change and Global Warming in 2023

Hours later, outside the plenary session, small island nations and European nations along with Colombia, held hands and hugged in an emotional show of support for greater ambition. But there was more self-congratulations Wednesday than flagellations. “I am in awe of the spirit of cooperation that has brought everybody together,” United States Special Envoy John Kerry said. He said it shows that nations can still work together despite what the globe sees with wars in Ukraine and the Middle East. “This document sends very strong messages to the world.” United Nations Secretary-General Antonio Guterres said in a statement that “for the first time, the outcome recognizes the need to transition away from fossil fuels.” “The era of fossil fuels must end – and it must end with justice and equity,” he said. United Nations Climate Secretary Simon Stiell told delegates that their efforts were “needed to signal a hard stop to humanity’s core climate problem: fossil fuels and that planet-burning pollution. Whilst we didn’t turn the page on the fossil fuel era in Dubai, this outcome is the beginning of the end.” Stiell cautioned people that what they adopted was a “climate action lifeline, not a finish line”.

Among critical media analyses, [BBC reporter Dulcie Lee commented](#), “The host country, the United Arab Emirates, had built expectations sky-high in the first few days, with Jaber proposing a deal to “phase out” fossil fuels. In the end, the final pact doesn’t go so far. It “calls on” countries to “transition away” from fossil fuels, and specifically for energy systems – but not for plastics, transport or agriculture. Moments later, the applause had turned to stunned silence when a delegate representing small island states, who are particularly vulnerable to climate change, accused the president of pushing through the text while they weren’t in the room. The final text had a “litany of loopholes”, they said”.

Several [cultural](#)-themed stories relating to climate change or global warming circulated

“After days of shaving off the edges of key warming issues, climate negotiators zeroed in on the tough job of dealing with **the main cause of what’s overheating the planet: fossil fuels**. As scientists, activists and United Nations officials repeatedly detailed how the world needs to phase-out the use of coal, oil and natural gas, the United Arab Emirates-hosted conference opened “energy transition day.”



Activists protest against fossil fuels at the COP28 UN Climate Summit on December 5, in Dubai. Photo: Peter Dejong/AP.

during the month of December. Among them, there were stories about of the ongoing California lawsuit against the US Environmental Protection Agency on behalf of young people. For example, [National Public Radio correspondent Jeff Brady reported](#), “Eighteen California children are suing the Environmental Protection Agency, claiming it violated their constitutional rights by failing to protect them from the effects of climate change. This is the latest in a series of climate-related cases filed on behalf of children. The federal lawsuit is called Genesis B. v. United States Environmental Protection Agency. According to the lawsuit, the lead plaintiff “Genesis B.” is a 17-year-old Long Beach, California resident whose parents can’t afford air conditioning. As the number of extreme heat days increases, the lawsuit says Genesis isn’t able to stay cool in her home during the day. “On many days, Genesis must wait until the evening to do schoolwork when temperatures cool down enough for her to be able to focus,” according to the lawsuit. The other plaintiffs range in age from eight to

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17 and also are identified by their first names and last initials because they are minors. For each plaintiff, the lawsuit mentions ways that climate change is affecting their lives now, such as wildfires and flooding that have damaged landscapes near them and forced them to evacuate their homes or cancel activities”.

Also, media accounts in December covered stories with *ecological* and *meteorological* dimensions of climate change or global warming. Flooding in Australia - with links to a changing climate - provided an illustrative case. For example, *BBC* journalist **Tiffanie Turnbull** wrote, “Major floods have inundated parts of northern Queensland - with the heavy rain thwarting attempts to evacuate a settlement hit by rising water. Extreme weather driven by tropical cyclone Jasper has dumped a year’s worth of rain on some areas...Eastern Australia has been hit by frequent flooding in recent years and the country is now enduring an El Niño weather event, which is typically associated with extreme events such as wildfires and cyclones. Australia has been plagued by a series of disasters in recent years - severe drought and bushfires, successive years of record floods, and six mass bleaching events on the Great Barrier Reef. A future of worsening disasters is likely unless urgent action is taken to halt climate change, the latest UN Intergovernmental Panel on Climate Change (IPCC) report warns”.

Elsewhere, several regions of Bolivia have declared an emergency due to lack of water. *El País* journalist **Patricia R. Blanco** wrote, “Bolivia is suffering an environmental catastrophe, seven of its nine departments have already declared an emergency due to drought and where fires have devastated almost three million hectares of the Bolivian Amazon (twice Mexico City), according to the Defensoría del Pueblo, and they have left large layers of pollution that have reached the country’s large cities. Titicaca, the highest navigable lake in the world, is at its lowest level since records exist and in November 15 historical records for maximum temperatures were broken in different places in the country, according to the Servicio Nacional de Meteorología e Hidrología. The prices of the basic basket, such as potatoes

### Genesis B. v. US EPA

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Members of Our Children's Trust legal team at the first US youth climate change trial at Montana's First Judicial District Court. Photo: William Campbell/Getty Images.

or goose (types of tuber), have tripled due to the drop in production caused by water scarcity. But in this country, the most vulnerable to climate change in South America and the one that can be most affected by the lack of water on the entire continent, according to the index of the American university of Notre Dame, the situation will worsen with the arrival of El Niño, expected for early 2024: this cyclical phenomenon will result in a total absence of rain in the Bolivian highlands. And if before El Niño arrives there continues to be no rainfall, El Alto and La Paz, the second and third most populated cities in the country, respectively, will run out of water in February, according to the Gestión Ambiental authorities of the two municipalities”.

Many *scientific* themes continued to emerge in media stories during the month of December through new studies, reports, and assessments. To illustrate, a report from the Global Carbon Project noting a 1.1% increase in greenhouse gas

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Figure 3. Examples of newspaper front pages with climate change stories in December.

emissions in 2023 (from 2022 levels) garnered attention. For example, [Washington Post correspondent Shannon Osaka noted](#), “The last year has been filled with energy news that seems hopeful. The world has now installed more than 1 terawatt of solar panel capacity – enough to power the entire European Union. Purchases of electric vehicles have been surging: Over 1 million vehicles have been sold in the United States this year, with an estimated 14 million sold worldwide. And, looking at the rapid growth in wind, batteries and technologies such as heat pumps, you could be excused for thinking that the fight against climate change might actually be going ... well. But a new analysis, released Tuesday morning local time as world leaders gather in Dubai to discuss the progress in cutting emissions, shows the grim truth: The surge in renewables has not been enough to displace fossil fuels. Global carbon dioxide emissions from fossil fuels are expected to rise by 1.1 percent in 2023, according to the analysis from the Global Carbon Project. “Renewables are growing to record levels, but fossil fuels also keep growing to record highs,” said Glen Peters, a senior researcher at the Cicero Center for International Climate Research in Oslo who co-wrote the new analysis”.

Moreover, published research examining Earth’s support systems grabbed media headlines and stories in December. For example, [Guardian correspondent Ajit Niranjana reported](#), “Many of the gravest threats to humanity are drawing closer, as carbon pollution heats the planet to

ever more dangerous levels, scientists have warned. Five important natural thresholds already risk being crossed, according to the Global Tipping Points report, and three more may be reached in the 2030s if the world heats 1.5C (2.7F) above pre-industrial temperatures. Triggering these planetary shifts will not cause temperatures to spiral out of control in the coming centuries but will unleash dangerous and sweeping damage to people and nature that cannot be undone. “Tipping points in the Earth system pose threats of a magnitude never faced by humanity,” said Tim Lenton, from the University of Exeter’s Global Systems Institute. “They can trigger devastating domino effects, including the loss of whole ecosystems and capacity to grow staple crops, with societal impacts including mass displacement, political instability and financial collapse.” The tipping points at risk include the collapse of big ice sheets in Greenland and the West Antarctic, the widespread thawing of permafrost, the death of coral reefs in warm waters, and the collapse of one oceanic current in the North Atlantic. Unlike other changes to the climate such as hotter heatwaves and heavier rainfall, these systems do not slowly shift in line with greenhouse gas emissions but can instead flip from one state to an entirely different one. When a climatic system tips – sometimes with a sudden shock – it may permanently alter the way the planet works. Scientists warn that there are large uncertainties around when such systems will shift but the

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report found that three more may soon join the list. These include mangroves and seagrass meadows, which are expected to die off in some regions if the temperatures rise between 1.5C and 2C, and boreal forests, which may tip as early as 1.4C of heating or as late as 5C”.

Also in December, media stories ran in many outlets about the EU Copernicus Climate Change Service report that the past month was on pace to be the hottest December on record. For example, **CBS News correspondent Li Cohen reported**, “After months of expectation, it’s official – 2023 will be the hottest year ever recorded. The European Union’s Copernicus Climate Change Service announced the milestone after analyzing data that showed the world saw its warmest-ever December. Last month was roughly 1.75 degrees Celsius warmer than the pre-industrial average, Copernicus said, with an average surface air temperature of 14.22 degrees Celsius, or about 57.6 degrees Fahrenheit. And now, Copernicus says that for January to December 2023, global average temperatures were the highest on record – 1.46 degrees Celsius above the pre-industrial average”. As a second example, **El País journalists Manuel Planelles, Clemente Álvarez and Laura Navarro noted**, “From January to November, the planet’s average temperature has been 1.46 degrees Celsius above pre-industrial levels, and the annual variation is expected to be similar”.

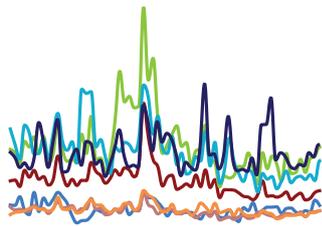
Later in the month, the annual ‘Arctic Report Card’ published by researchers at the US National Oceanic and Atmospheric Administration (NOAA) earned media attention. For example, **New York Times journalist Delger Erdenesanna wrote**, “This summer was the Arctic’s warmest on record, as it was at lower latitudes. But above the Arctic Circle, temperatures are rising four times as fast as they are elsewhere. The past year overall was the sixth-warmest year the Arctic had experienced since reliable records began in 1900, according to the 18th annual assessment of the region, published by the National Oceanic and Atmospheric Administration on Tuesday. “What happens in the Arctic does not stay in the Arctic,” said Rick Thoman, a climate specialist at the University of Alaska Fairbanks and an editor of the new report, called the

“Tipping points in the Earth system pose threats of a magnitude never faced by humanity. They can trigger devastating domino effects, including the loss of whole ecosystems and capacity to grow staple crops, with societal impacts including mass displacement, political instability and financial collapse.”



Mangrove forests can protect land areas from rising sea levels and coastal abrasion, but they are at risk. Photo: Hotli Simanjuntak/EPA.

Arctic Report Card. The assessment defines the Arctic as all areas between 60 and 90 degrees north latitude. Greenland’s melting ice sheet is one of the biggest contributors to global sea level rise, and scientists are investigating links between weather in the Arctic and extreme weather farther south. The hottest spots on the Arctic map varied throughout the year. At the beginning of the year, temperatures over the Barents Sea north of Norway and Russia were as much as 5 degrees Celsius, or 9 degrees Fahrenheit, above the 1991-2020 average. In the spring, temperatures were also about 5 degrees Celsius hotter than average in northwest Canada. Hotter air temperatures dry out vegetation and soil, priming the pump for wildfires to burn more easily. This year, during Canada’s worst wildfire season on record, fires burned more than 10 million acres in the Northwest Territories. More than two-thirds of the territories’ population of 46,000 people had to be evacuated at various points and smoke from the fires reached millions more people, reducing air quality as far as the southern United States”.



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