

A REVIEW OF MEDIA COVERAGE OF CLIMATE CHANGE AND GLOBAL WARMING IN 2020

SPECIAL ISSUE 2020

MeCCO monitors 120 sources (across newspapers, radio and TV) in 54 countries in seven different regions around the world. MeCCO assembles the data by accessing archives through the Lexis Nexis, Proquest and Factiva databases via the University of Colorado libraries.

Media and Climate Change Observatory, University of Colorado Boulder http://mecco.colorado.edu





















A Review of Media Coverage of Climate Change and Global Warming in 2020

At the global level, 2020 media attention dropped 23% from 2019. Nonetheless, this level of coverage was still up 34% compared to 2018, 41% higher than 2017, 38% higher than 2016 and still 24% up from 2015. In fact, 2020 ranks second in terms of the amount of coverage of climate change or global warming (behind 2019) since our monitoring began 17 years ago in 2004.

Canadian print media coverage – The Toronto Star, National Post and Globe and Mail – and United Kingdom (UK) print media coverage – The Daily Mail & Mail on Sunday, The Guardian & Observer, The Sun & Sunday Sun, The Telegraph & Sunday Telegraph, The Daily Mirror & Sunday Mirror, and The Times & Sunday Times – reached all-time highs in 2020.

has been a n o t h e r 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. Yet, climate change and global warming garnered coverage through stories manifesting through primary and often intersecting, political, economic, scientific, cultural as well as ecological and meteorological themes.

As the year 2020 has drawn to a close, new vocabularies have pervaded the centers of our consciousness: 'flattening the curve', systemic racism, 'pods', hydroxycholoroquine, 'social distancing', quarantines, 'remote learning', essential and front-line workers, 'superspreaders', P.P.E., 'doomscrolling', and Zoom. This past year has been one like no other, where members of the Media and Climate Change Observatory (MeCCO) team – like many others around the world – have lost family to COVID-19.

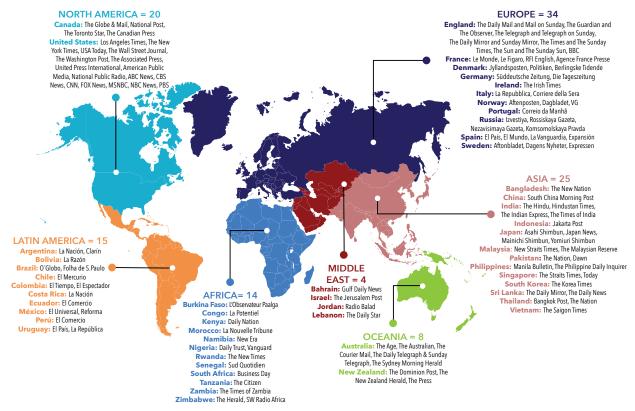


Figure 1. Map of the 120 media sources we monitor for coverage of climate change or global warming across seven different regions around the world.

A Review of Media Coverage of Climate Change and Global Warming in 2020



In 2020, January was the high water mark for global coverage of climate change or global warming among the sources tracked by our MeCCO team, followed by February and November.

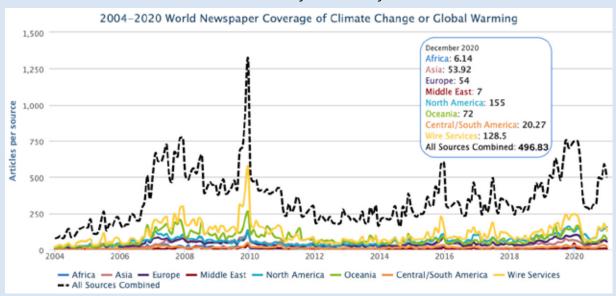


Figure 2. Media coverage of climate change or global warming in seven different regions around the world, from January 2020 through December 2020.

Climate change - while at times competing for media attention - nonetheless did not disappear from public conversations in 2020. From Arctic and Antarctic ice loss to Zimbabwe locusts, reports connecting these dots with a changing climate drove media coverage. These were interwoven with stories of Australian and North American wildfires, floods in Bhutan, Bangladesh, Nepal, Sri Lanka and the UK, rainforest retreat in Congo and Russian heatwaves. Further ecological and meteorological accounts linking to climate change included cyclones Nivar and Amphan, tropical storms Nangka and Saudel, typhoons Molave and Goni and hurricanes Nana, Eta and Iota. Political and economic-themed stories in 2020 included decarbonization and renewables growth, as well as corporate pledges for emissions reductions and BlackRock divestment plans. Further stories included the US Trump Administration regulatory rollbacks and climate policy (in)action as well as the consequential November 2020 US Presidential scientific-themed election. Many throughout the year included record-breaking global temperatures and new understanding of intersectional climate challenges (e.g. links between COVID-19 and climate change) and

humans' role in them. Moreover, many *cultural* stories relating to climate change punctuated the year 2020, from Greta Thunberg and Fridays for Future demonstrations (adapted) as well as ongoing pipeline protests, *Guardian* style-guide changes and *Covering Climate Now* initiatives.

Throughout 2020, we continued to monitor media coverage of climate change or global warming in 11 languages (English, Spanish, French, Italian, Japanese, Norwegian, Russian, Swedish, Danish, German and Portuguese) across 54 countries and 120 sources (TV, radio and newspapers) in seven regions on planet Earth (Africa, Asia, Europe, Latin America, Middle East, North America and Oceania).

At the global level, 2020 media attention dropped 23% from 2019. Nonetheless, this level of coverage was still up 34% compared to 2018, 41% higher than 2017, 38% higher than 2016 and still 24% up from 2015. In fact, 2020 ranks second in terms of the amount of coverage of climate change or global warming (behind 2019) since our monitoring began 17 years ago in 2004.

A Review of Media Coverage of Climate Change and Global Warming in 2020

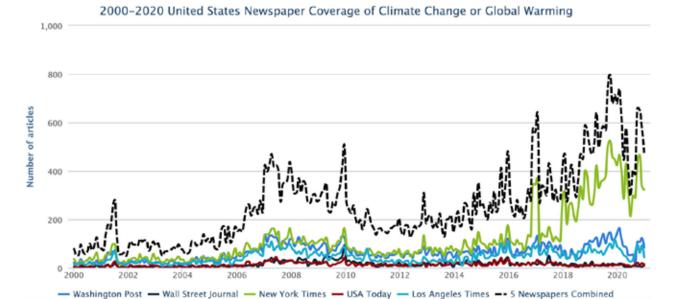


Figure 3. Media coverage of climate change or global warming month to month in *The Los Angeles Times, The New York Times, USA Today, The Washington Post*, and *The Wall Street Journal* in the US from January 2000 through December 2020.

In 2020, January was the high water mark for global coverage of climate change or global warming among the sources tracked by our MeCCO team, followed by February and November (see Figure 2).

Of note, Canadian print media coverage - The Toronto Star, National Post and Globe and Mail - and United Kingdom (UK) print media coverage - The Daily Mail & Mail on Sunday, The Guardian & Observer, The Sun & Sunday Sun, The Telegraph & Sunday Telegraph, The Daily Mirror & Sunday Mirror, and The Times & Sunday Times - reached all-time highs in 2020.

In 2020, we at MeCCO introduced expanded media monitoring of climate change or global warming around the world.

- in February, MeCCO team members Gabi Mocatta and Erin Hawley began tracking Russian print media coverage of climate change in Izvestiya, Rossiskaya Gazeta, Nezavisimaya Gazeta, and Komsomolskaya Pravda
- in March, MeCCO team members Rogelio Fernández-Reyes, Isidro Jiménez Gómez and Jeremiah Osborne-Gowey integrated three new Spanish-language sources: El Espectador (Colombia), Folha de São Paulo (Brazil) and Clarín (Argentina)

 in August, MeCCO team members Lars Kjerfulf Petersen and Anne Gammelgaard Ballantyne began monitoring Danish print media coverage of climate change in Jyllandsposten, Politiken, and Berlingske Tidende

We also expanded our monitoring in nine languages, to now monitoring media coverage of climate change or global warming in 11 languages:

- Danish: 'klimaforandringer' or 'global opvarmning'
- English: 'climate change' or 'global warming'
- · 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'
- $\bullet \ \ Norwegian: 'global\ oppvarming'\ or\ 'klima endring'$
- Portuguese: 'mudanças climáticas' or 'aquecimento global'
- Russian: 'изменение климата' or 'глобальное потепление'
- · Spanish: 'cambio climático' or 'calentamiento global'
- · Swedish: 'global uppvärmning' or 'klimatförändring'

At the United States (US) country level, Figure 3 illustrates these trends month to month in US press accounts across five newspaper publications over the past two decades (2000-2020) - The Washington Post, The Wall Street Journal, The New York Times, USA Today, and The Los Angeles Times.

Figure 4 shows trends month to month over the past two decades (2000-2020) across US

A Review of Media Coverage of Climate Change and Global Warming in 2020

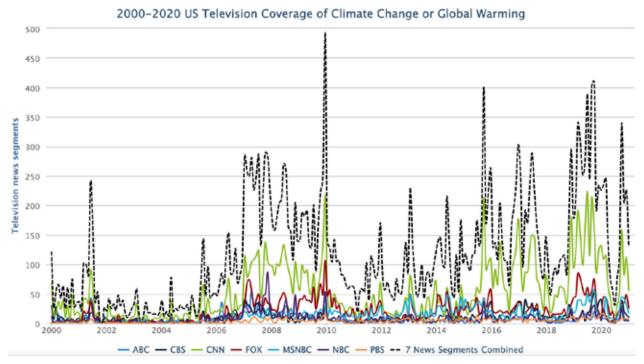


Figure 4. Media coverage of climate change or global warming month to month on ABC, CBS, CNN, Fox News Network, MSNBC, and NBC in the US from January 2000 through December 2020.

television news - ABC, CBS, CNN, Fox News Network, MSNBC, and NBC.

The following month-to-month explainers or summaries are reprises of monthly summaries that our MeCCO team has compiled and posted each month on our website. In aggregate, this is our fourth annual review of coverage. 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 2021.

The project is based in the Cooperative Institute for Research in Environmental Sciences (CIRES) at the University of Colorado Boulder. However, contributions are made through collaborations and partnerships with MeCCO members at Aarhus University (Denmark), Deakin University (Australia), Technical University of Munich (Germany), National Institute for Environmental Studies (Japan), Oslo Metropolitan University (Norway), University of New England (US), Universidad de Sevilla (Spain), and Universidad

1 The website can be accessed here http://mecco.colorado.edu.

Complutense de Madrid (Spain). MeCCO team members are Midori Aoyagi, Andrew Benham, Max Boykoff, Patrick Chandler, Presley Church, Meaghan Daly, Kaori Doi, Rogelio Fernández-Reyes, Anne Gammelgaard Ballantyne, Lauren Gifford, Erin Hawley, Isidro Jiménez Gómez, Jennifer Katzung, Lucy McAllister, Marisa McNatt, Gabi Mocatta, Ami Nacu-Schmidt, David Oonk, Jeremiah Osborne-Gowey, Olivia Pearman, Lars Kjerfulf Petersen, Anne Hege Simonsen, and Andreas Ytterstad.

With this year-end retrospective, let us take a breath and reflect on how the past year of media coverage of climate change may shape what 2021 may have in store for us. What follows are 'highlights' of key events, stories and developments through *political*, *scientific*, *cultural*, *ecological* and *meteorological* themes that have transpired during our collectively experienced year 2020.

A Review of Media Coverage of Climate Change and Global Warming in 2020

JANUARY "If you think you've heard this story before, you haven't seen anything yet"



A wildfire glows at dusk near Clear Range, Australia on January 31. Photo: Rick Rycroft/AP.

anuary media attention to climate change and global warming at the global level increased from Dec. 2019 coverage, up about 4%. Compared to a year earlier, the number of news articles and segments nearly doubled.

Regionally, the ongoing stream of stories in January 2020 increased most in Oceania (up 25%) and North America (up 15%) from December 2019. Increases in coverage in these regions in January 2020 compared to January 2019 was striking, with coverage in Oceania up 144% and coverage in North America up 85%.

At the national-level, coverage rose most in Australia (up 30%) in January 2020 compared to the previous month of December 2019. This coverage in January 2020 was also more than triple the amount of coverage in January 2019. Coverage was also notably higher in the United Kingdom (UK), up 17% in January 2020 from December 2019 and up 123% from coverage in January 2019. And coverage in United States

Coverage rose most in Australia (up 30%) in Jan. 2020 compared to the previous month of Dec. 2019. This coverage in Jan. 2020 was also more than triple the amount of coverage in Jan. 2019. Coverage was also notably higher in the UK, up 17% in Jan. 2020 from Dec. 2019 and up 123% from coverage in Jan. 2019. And coverage in US television and newspapers increased 7.5% in Jan. 2020 from the previous month while going up 43% from Jan. 2019.

(US) television and newspapers increased 7.5% in January 2020 from the previous month while going up 43% from January 2019.

In January, *ecological* and *meteorological* connections with climate issues continued to contribute substantially to media coverage of climate change around the world. To illustrate,

A Review of Media Coverage of Climate Change and Global Warming in 2020

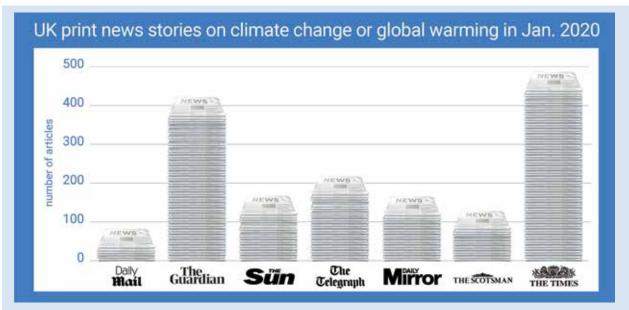


Figure 5. Number of news stories per outlet in January 2020 across UK newspapers Daily Mail & Mail on Sunday; Guardian & Observer; Sun, The News of the World & Sunday Sun; Telegraph & Sunday Telegraph; The Daily Mirror & Sunday Mirror; The Scotsman & Scotland on Sunday; and Times & Sunday Times.

the ongoing domestic as well as international reports on ongoing Australian wildfires generated numerous media reports that connected the dots between these fires and a changing climate. As the death toll rose into the twenties while 12 million acres have burned and nearly a billion animals have been displaced or killed, media coverage intensified. For example, Washington Post journalist Andrew Freedman reported, "While bush fires are a regular occurrence during the Australian dry season, a combination of longterm climate change and natural variability is making the situation far worse. Human-caused global warming is raising the odds of and severity of extreme-heat events and also adding to the severity of wildfires by speeding the drying of the landscape, among other influences. One of the most robust conclusions of climate studies has been that human-caused warming would increase the frequency and severity of heat waves and also boost the occurrence of days with extreme fire danger".2

However, as media mogul Rupert Murdoch owns News Corp Australia that, in turn, runs nearly 60% of Australia's daily media organizations, this control over narratives became part of the stories

2 https://www.washingtonpost.com/ weather/2020/01/04/record-shattering-heat-strongwinds-cause-australias-bush-fire-crisis-escalate appearing in January 2020. For example, New York Times journalist Damian Cave reported, "The idea that "greenies" or environmentalists would oppose measures to prevent fires from ravaging homes and lives is simply false. But the comment reflects a narrative that's been promoted for months by conservative Australian media outlets, especially the influential newspapers and television stations owned by Rupert Murdoch. And it's far from the only Murdoch-fueled claim making the rounds. His standard-bearing national newspaper, The Australian, has also repeatedly argued that this year's fires are no worse than those of the past - not true, scientists say, noting that 12 million acres have burned so far, with 2019 alone scorching more of New South Wales than the previous 15 years combined".3

News Corp Australia, via *The Australian*, pushed back while also accusing other outlets of political motivations behind their critiques. The Editors wrote, "our factual account of bushfires, climate change and the remedies, as well as our editorial commentary on these issues, have been wilfully and ineptly misrepresented by *The New York Times* and *The Guardian Australia* as climate denial. The truth is that the political and media reaction to this devastating bushfire

3 https://www.nytimes.com/2020/01/08/world/australia/fires-murdoch-disinformation.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

season is a bid to replay the May election and get a different result. There is a belief that The Australian – having predicted the result – is somehow complicit in driving policies that promote devastating bushfires. This is not only disingenuous but disgraceful".⁴

Journalist Zoe Samios from *The Sydney Morning Herald* reflected, "As bushfires rip through the country, criticism of News Corp's climate change coverage in its Australian newspapers has been unrelenting. As the links between climate change and the ferocity of the bushfires played out, a subsidiary debate about the appropriateness of certain articles and opinion pieces in *The Australian*, *The Daily Telegraph* and *The Herald Sun* gathered momentum... News Corp has run many pieces that have questioned the legitimacy of widely-accepted climate-change science over the past decade".⁵

Domestic as well as international reports on Australian wildfires generated numerous media reports that connected the dots between fires and a changing climate. As the death toll rose into the twenties while 12 million acres have burned and nearly a billion animals have been displaced or killed, media coverage intensified.



4 https://www.theaustralian.com.au/commentary/editorials/cool-heads-needed-to-craft-response-to-bushfire-crisis/news-story/40aa0a6d351e8e5578f700dd76717548

5 https://www.smh.com.au/business/companies/inside-the-murdoch-family-climate-schism-20200116-p53ruu.html



Figure 6. Word frequencies in Australian and New Zealand print media sources in January 2020.

In coverage across Australia and New Zealand, 'fire', 'fires' and 'bushfires' along with 'climate', 'change', 'Australia', 'Australian', 'government' and 'Morrison' all appeared in the top 25 most frequently used words in January 2020 news stories.⁶

In January, political and economic content also shaped media coverage. Prominently, many media outlets abundantly covered the announcement early in January from BlackRock that they were divesting from carbon-based energy projects that posed significant risk to ongoing capitalist profitmaking. In particular, an open letter from CEO Laurence Funk garnered significant attention, as a break from businessas-usual and potentially (with the scale of BlackRock investments) a sign of emerging trends. For example, journalist Stephen Gandel from CBS News reported, "BlackRock, the world's largest asset manager, says it is selling \$500 million of coal-related investments as part of a larger shift to make climate change central to its investment decisions. BlackRock founder and CEO Laurence Fink, who oversees the firm's management of \$7 trillion in funds, announced the initiative in his influential annual letter to 6 The top 25 words were climate, change, Australia,

new, government, people, year, Australian, one, Morrison, emissions, world, fire, fires, also, time, words, now, minister, news, per, first, bushfires, just, and years.

A Review of Media Coverage of Climate Change and Global Warming in 2020

chief executives of major companies. The letter was posted on BlackRock's website Tuesday. In it, Fink said he believes we are "on the edge of a fundamental reshaping of finance" because of a warming planet. Climate change has become the top issue raised by clients, Fink said in the letter, and it will soon affect everything from municipal bonds to long-term mortgages for homes".7 Meanwhile, Washington Post journalists Stephen Mufson and Rachel Siegel noted, "In a separate letter to investors, BlackRock announced it would exit investments with high environmental risks, including thermal coal, which is burned to produce electricity and creates carbon dioxide, a greenhouse gas. BlackRock will also launch new investment products that screen for fossil fuels. The nation's largest financial institutions are under increasing pressure from investors, activists and some political leaders for their tepid response to climate change, even as the Trump administration has systematically rolled back environmental regulations to promote economic growth".8

Also in January, the World Economic Forum in Davos, Switzerland - with particular attention paid to climate risk - led to media attention. Of note, the annual risk report released ahead of the meeting contained news that for the first time the top five risk concerns related to climate, biodiversity loss, environment and sustainability. For example, journalist Larry Elliott from The Guardian reported, "A year of extreme weather events and mounting evidence of global heating have catapulted the climate emergency to the top of the list of issues worrying the world's elite. The World Economic Forum's annual risks report found that, for the first time in its 15-year history, the environment filled the top five places in the list of concerns likely to have a major impact over the next decade".9

In January, *scientific* dimensions also grabbed media attention to climate change and global 7 https://www.cbsnews.com/news/blackrock-puts-climate-change-first-in-its-its-investment-strategy 8 https://www.washingtonpost.com/business/2020/01/14/blackrock-letter-climate-change 9 https://www.theguardian.com/business/2020/jan/15/climate-crisis-environment-top-five-places-world-economic-forum-risks-report

In coverage across Australia and New Zealand, 'fire', 'fires' and 'bushfires' along with 'climate', 'change', 'Australia', 'Australian', 'government' and 'Morrison' all appeared in the **top 25** most frequently used words in Jan. 2020 news stories.

warming. For example, pronouncements that 2019 was the second-hottest year on record (and 2010-2019 was the hottest decade) generated media interest. First to report, the Copernicus Climate Change Service (supported by the European Union) made the announcement. Shortly thereafter, the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA) announced similar findings.

For example, journalist Drew Kann from *CNN* reported, "From France to Australia, from India to Alaska ... if you stepped outside in almost any corner of the globe, you could feel it. 2019 was hot. Really hot. In fact, we just lived through the second-hottest year ever recorded, according to the Copernicus Climate Change Service, the European Union's flagship climate monitoring organization. The only year in recorded history the planet has experienced that was hotter was 2016, and only by a hair -- just 0.04 degrees Celsius. The past five years and the last decade (2010-2019) were the warmest ever recorded, the report found, and 2019 was the hottest year Europe has ever endured".¹⁰

Then the next week, following NOAA and NASA reports, further media coverage spread across the globe. NOAA and NASA noted 2019 as the second-hottest year on record while reporting that 19 of the hottest years since record-keeping began in 1850 have been in the last two decades. Moreover, it has been 43 years since global temperatures were cooler than the 20th century average: in other words, if you are

¹⁰ https://www.cnn.com/2020/01/08/world/2019-temperatures-second-hottest-year-on-record-climate-change/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

43 or younger, you have never experienced a cooler than average year on planet Earth.

For example, Associated Press journalist Seth Borenstein reported, "The decade that just ended was by far the hottest ever measured on Earth, capped off by the secondwarmest year on record, two U.S. agencies reported Wednesday. And scientists said they see no end to the way man-made climate change keeps shattering records. "If you think you've heard this story before, you haven't seen anything yet," Gavin Schmidt, director of NASA's Goddard Institute for Space Studies, said at the close of a decade plagued by raging wildfires, melting ice and extreme weather that researchers have repeatedly tied to human activity. Schmidt said Earth as a whole is probably the hottest it has been during the Holocene – the past 11,500 years or so - meaning

this could be the warmest period since the dawn of civilization. But scientists' estimates of ancient global temperatures, based on tree rings, ice cores and other telltale signs, are not precise enough to say that with certainty. The 2010s averaged 58.4 degrees Fahrenheit (14.7 degrees Celsius) worldwide, or 1.4 degrees (0.8 C) higher than the 20th century average and more than one-third of a degree (one-fifth of a degree C) warmer than the previous decade, which had been the hottest on record, according to the National Oceanic and Atmospheric Administration. The decade had eight of the 10 hottest years on record. The only other years in the top 10 were 2005 and 1998. NASA and NOAA also calculated that 2019 was the secondhottest year in the 140 years of record-keeping. Five other global teams of monitoring scientists agreed, based on temperature readings taken on Earth's surface, while various satellite-based measurements said it was anywhere from the hottest year on record to the third-hottest.

Media outlets covered the announcement from BlackRock that they were divesting from carbon-based energy projects that posed significant risk to capitalist profitmaking. An open letter from CEO Larry Funk garnered attention, as a break from business-as-usual and potentially a sign of emerging trends.



Demonstrators carry a photo of BlackRock chief executive Larry Fink on December 6. Photo: Michael Robinson Chavez, The Washington Post.

Several scientists said the coming years will be even hotter, knocking these years out of the record books".¹¹

Meanwhile, Wall Street Journal reporter Robert Lee Hotz noted, "The world experienced near-record global temperatures in 2019, federal climate scientists said. The year capped what the scientists said was the warmest decade in modern times".¹²

Not only did atmospheric temperatures in 2019 earn media attention. Record high ocean temperatures also generated media interest, stemming from a study published in Advances in Atmospheric Sciences that communicated findings that the past decades has been the warmest on record for the world's oceans while the rate of ocean warming has increased 500% in

11 https://apnews.com/9ba6b553a63f93ed70aa440 5b2cbcf04

12 https://www.wsj.com/articles/2019-was-second-warmest-year-on-record-federal-climate-scientists-say-11579105990

A Review of Media Coverage of Climate Change and Global Warming in 2020

the last four decades. *Daily Mail* journalist Jonathan Chadwick reported, "The world's oceans were warmer in 2019 than at any other time in human history, according to a new study, amid fears that climate change is speeding up. Average global temperatures of the oceans in 2019 soared to 0.075°C (0.135°F) above the average temperature from between 1981 and 2010. To warm the world's water by this much requires a huge amount of energy, an estimated 228 sextillion joules of heat. Academics claim this is equivalent to 3.6 billion Hiroshima atom-bomb explosions".¹³

Finally, media accounts in January focused on *cultural* themes as well. For example, a Bulletin of the Atomic Scientists update about the Doomsday Clock moving closer to midnight (a.k.a. 'annihilation') attracted media reports. For example, US-based *ABC News* reporter Bill Hutchinson noted, "The world just got 20 seconds closer to catastrophe. Gauging the duel threats of nuclear warfare and climate change, the Bulletin of the Atomic Scientists announced on Thursday that the minute hand on the metaphorical "Doomsday Clock" has been

moved forward to 100 seconds before midnight, the closest it has come to signaling a global meltdown".¹⁴

As another example, journalist David Welna from US *National Public Radio* reported, "Two years after moving the metaphorical minute hand of its Doomsday Clock to within two minutes of midnight – a figurative two-minute warning for all humanity – the science and security board of the Bulletin of the Atomic Scientists revealed Thursday that it has moved that minute hand another 20 seconds closer to the midnight hour...With 13 Nobel laureates on its board and founded by scientists who worked on the atomic bomb-building Manhattan Project during World War. II, the University of Chicago-based Bulletin 13 https://www.dailymail.co.uk/sciencetech/articles/882695/Oceans-warmest-2019-human-

article-7882695/Oceans-warmest-2019-human-history.html

14 https://abcnews.go.com/US/doomsday-clock-decision-looming-scientists-gauge-nuclear-climate/story?id=68299493

NOAA and NASA noted 2019 as the second-hottest year on record while reporting that 19 of the hottest years since record-keeping began in 1850 have been in the last two decades. It has been 43 years since global temperatures were cooler than the 20th century average: in other words, if you are 43 or younger, you have never experienced a cooler than average year on planet Earth.



A man cools down near a mist fan during a heat wave in Melbourne, Australia. Photo: Saeed Khan/Getty Images.

of the Atomic Scientists has used its Doomsday Clock to register existential threat levels and raise awareness of them".¹⁵

Furthermore, *BBC News* reported, "The clock now stands at its closest to doomsday since it began ticking. The idea began in 1947 to warn humanity of the dangers of nuclear war. Last year the clock was set at two minutes to midnight - midnight symbolises the end of the world - the same place it was wound to in 2018". 16

Also, at the end of January - traversing *cultural* and *economic* themes - news broke that *The Guardian* would no longer be accepting advertising from fossil fuel companies and carbon-based energy corporations. *Guardian*

¹⁵ https://www.npr.org/2020/01/23/799047659/the-end-may-be-nearer-doomsday-clock-moves-within-100-seconds-of-midnight

¹⁶ https://www.bbc.com/news/world-us-canada-51213185

A Review of Media Coverage of Climate Change and Global Warming in 2020

media editor Jim Waterson explained, "The Guardian will no longer accept advertising from oil and gas companies, becoming the first major global news organisation to institute an outright ban on taking money from companies that extract fossil fuels. The move, which follows efforts to reduce the company's carbon footprint and increase reporting on the climate emergency, was announced on Wednesday and will be implemented with immediate effect. The ban will apply to any business primarily involved in extracting fossil fuels, including many of the world's largest polluters... Environmental groups have long argued that energy companies use expensive advertising campaigns to "greenwash" their activities, paying to highlight relatively small investments in renewable energy while continuing to make the vast majority of their revenue from extracting fossil fuels. They have called for news outlets to reject such advertising, although until now only a handful of small outlets have adopted this approach. Last year, the editor-in-chief, Katharine Viner, announced the Guardian would adjust its style guide to represent the scale of the environmental challenge facing the Earth, using terms such as "climate emergency" and "global heating" rather than "climate change" and "global warming". At a corporate level, the company has emphasised its commitment to becoming carbon-neutral by 2030, while also almost entirely divesting its Scott Trust endowment fund from fossil fuel investments. The decision to reject the advertising money from fossil fuel firms comes at a tricky time for the media industry, with the Guardian Media Group board warning the business is facing substantial headwinds this year. Advertising makes up 40% of GMG revenue, meaning it remains a key way to fund the journalism produced by Guardian and Observer journalists around the world".¹⁷

Meanwhile, Washington Post journalist Kim Bellware reported, "Anna Bateson, the Guardian's acting chief executive, and Hamish Nicklin, chief revenue officer, said in a joint statement that the move was driven, in part, by their newspaper's

17 https://www.theguardian.com/media/2020/jan/29/guardian-to-ban-advertising-from-fossil-fuel-firms-climate-crisis

Record high ocean temperatures generated media interest, stemming from a study published in *Advances in Atmospheric Sciences* with findings that the past decades have been the warmest on record for the world's oceans while the rate of ocean warming has **increased 500%** in the last four decades.



reporting on the urgency of climate change and a need to be true to the company's values - particularly, they said, as fossil fuel companies continue to use their power to influence policies that harm the planet. "Our decision is based on the decades-long efforts by many in that industry to prevent meaningful climate action by governments around the world," Bateson and Nicklin said. The changes to the Guardian's advertising policies come amid a larger shift in editorial vision when related to reporting on what it refers to as the "climate crisis." The organization updated its style guide in October to say it would use the terms "climate emergency" or "climate crisis" as "Climate change is no longer considered to accurately reflect the seriousness of the overall situation." Similarly, Guardian photo editors announced a change to how such stories are represented visually and signaled an end to images such as a lonely polar bear on a glacier in favor of ones that more clearly and accurately reflect the urgency and human cost of the crisis".18

¹⁸ https://www.washingtonpost.com/arts-entertainment/2020/01/29/guardian-fossil-fuel-advertising

A Review of Media Coverage of Climate Change and Global Warming in 2020

FEBRUARY "Experts say climate change is expected to bring more of the same"



A man walks through a swarm of desert locusts near Kitui county, east of Nairobi, Kenya. Photo: Dai Kurokawa/EPA

February media attention to climate change and global warming at the global level **decreased 12%** from January 2020 coverage, but was **up 62%** from the previous February 2019. Regionally, stories in February 2020 increased in North America (**up 6%**) from January 2020.

ebruary media attention to climate change and global warming at the global level decreased 12% from January 2020 coverage, but was up 62% from the previous February 2019. Regionally, stories in February 2020 increased in North America (up 6%) from January 2020. Meanwhile, coverage decreased in all other regions in February 2020 compared to the previous month. Yet, there were increases in coverage in all regions except Africa (down 15%) in February 2020 compared to February 2019, with coverage increasing most in Oceania (up 53%) and in North America (up 81%).

At the national-level, coverage in February 2020 generally declined slightly from January 2020 in the twelve nations where we specifically monitor country coverage (among 55 countries total). The exceptions in February 2020 were Canada

(up 47%), United States (US) television (up 6%) and Russia (up 13%) compared to the previous month's coverage in January 2020. Of note, thanks to the work of colleagues Gabi Mocatta and Erin Hawley from the University of Tasmania, we at MeCCO have begun to monitor four print sources in Russia from January 2000 - February 2020: *Izvestiya*, *Rossiskaya Gazeta*, *Nezavisimaya Gazeta*, and *Komsomolskaya Pravda*.¹⁹

In February, *political* and *economic* content dominated media coverage. Among numerous stories, corporations' declarations to move to carbon neutrality grabbed media attention. Among them, British Petroleum (BP) declarations to offset their emissions was a counterintuitive story that earned news considerations

19 https://sciencepolicy.colorado.edu/icecaps/research/media_coverage/russia/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

and scrutiny. For example, Wall Street Journal reporters David Hodari and Adriano Marchese wrote, "BP PLC pledged to reduce its net carbon emissions to zero by 2050 and restructure its oilfocused businesses to better navigate a transition to other fuels-a dramatic, if vague, promise by one of the world's biggest energy companies amid investor and consumer pressure over fossil fuels. The goal is the latest in a series of commitments, made over decades, by big oil companies to reduce emissions. While bold in ambition, BP didn't provide details about how it expects to accomplish the goal, or how much it will cost". 20 New York Times journalist Brad Plumer reported, "the pledge is another sign that major companies, including fossil-fuel producers, are facing growing pressure from investors and activists to show they are taking global warming seriously... Rising concerns about climate change pose an existential threat for oil and gas companies, since scientists have said that preventing dangerous temperature increases will require steep reductions in the use of fossil fuels. In recent years, shareholders have pressed oil companies to prepare for a future in which countries shift to electric vehicles or enact new regulations to limit carbon dioxide emissions".²¹

Meanwhile, the February Instagram announcement by Amazon CEO Jeff Bezos to give US\$10 billion to confront climate change generated numerous radio, television and newspaper stories. example, CNBC journalist Thomas Franck wrote, "Amazon founder and CEO Jeff Bezos on Monday announced the launch of a new Earth Fund that the e-commerce chief plans to use to combat the effects of climate change. He said in an Instagram post that he's pledging \$10 billion to start the fund, which will be called the Bezos Earth Fund, and will issue grants to scientists, activists and other organizations in their efforts to "preserve and protect the natural world." "We can save Earth," Bezos wrote in his post. "It's going to take collective action from big companies, small companies, nation states, global organizations, and individuals." "Climate change is the biggest threat

20 https://www.wsj.com/articles/bp-wants-to-be-carbon-neutral-by-2050-11581517147
21 https://www.nytimes.com/2020/02/12/climate/bp-greenhouse-gas-emissions.html

At the national level, coverage in February 2020 generally declined slightly from January 2020 in the twelve nations where we specifically monitor country coverage (among 55 countries total). The exceptions in February 2020 were Canada (**up 47%**), US television (**up 6%**) and Russia (**up 13%**) compared to the previous month's coverage in January 2020.

to our planet," he added. "I want to work alongside others both to amplify known ways and to explore new ways of fighting the devastating impact of climate change on this planet we all share." Bezos added in his post that he expects the Earth Fund to begin issuing grants to climate-oriented causes as soon as this summer".22 Concern, suspicion and critique proliferated as well. For example, journalist Amy Held from US National Public Radio reported, "some Amazon workers, deeply critical of their employer's own environmental record, say it is Amazon itself that has been complicit in the climate crisis and must change its ways. "We applaud Jeff Bezos' philanthropy, but one hand cannot give what the other is taking away," Amazon Employees For Climate Justice said in a statement in response to the pledge. "When is Amazon going to stop helping oil & gas companies ravage Earth with still more oil and gas wells? When is Amazon going to stop funding climate-denying think tanks like the Competitive Enterprise Institute and climate-delaying policy? When will Amazon take responsibility for the lungs of children near its warehouses by moving from diesel to all-electric trucking?" In April, thousands of Amazon workers signed an open letter to Bezos and Amazon's board of directors, calling on them to end contracts with oil and gas companies, halt donations to climate change-denying lawmakers and setting measurable goals".23

22 https://www.cnbc.com/2020/02/17/amazons-jeff-bezos-pledges-10-billion-to-launch-earth-fund-for-combating-climate-change.html
23 https://www.npr.org/2020/02/17/806720144/jeff-bezos-pledges-10-billion-to-fight-climate-change-planets-biggest-threat

A Review of Media Coverage of Climate Change and Global Warming in 2020

Also in February, stories of United Kingdom (UK) preparations for the United Nations Conference of Parties meeting on climate change earned media attention. For example, early in February journalist Jill Lawless from The Associated Press reported, "Britain announced Tuesday that it plans to ban the sale of new gas and diesel cars by 2035 - five years earlier than its previous target - in a bid to speed up efforts to tackle climate change. The announcement was timed to coincide with the launch of Britain's plans for the United Nations' climate summit, known as COP26, which is scheduled to be held in Glasgow in November. But the U.K. government's commitment to reducing greenhouse gas emissions was questioned by the woman who was appointed by Prime Minister Boris Johnson to head the Glasgow climate summit – and then was fired last week".24 Moreover, longtime BBC journalist Roger Harrabin noted, "The UK is hosting COP26 in Glasgow in November - but Boris Johnson sacked president Claire O'Neill on Friday. Mrs O'Neill told the BBC there was a "huge lack of leadership and engagement" from the government. But senior cabinet minister Michael Gove said Mr Johnson was dedicated to environmental issues. Mr Gove told BBC Radio 5 Live that the prime minister described his political outlook as that of a "green Tory" when they first met 30 years ago. "Ever since then I've seen his dedication to ensuring that we fight to ensure that our Earth is handed on in a better state to the next generation," he said. But Ms O'Neill, the former Conservative minister for energy and clean growth, said people should be wary of the prime minister's promises. "My advice to anybody to whom Boris is making promises - whether it is voters, world leaders, ministers, employees, or indeed family members - is to get it in writing, get a lawyer to look at it and make sure the money's in the bank," she told BBC Radio 4's Today programme".²⁵

In February, *cultural* dimensions about climate change and global warming earned media coverage. For example, Canadian protests of

24 https://apnews.com/9a62002f00ae709b3906495 c79487d35

25 https://www.bbc.com/news/science-environment-51368799

The Instagram announcement by Amazon CEO Jeff Bezos to give US\$10 billion to confront climate change generated numerous radio, television and newspaper stories.



pipeline construction - in part motivated by concern about climate change - made news. For example, Globe & Mail journalists Brent Jang and Wendy Stueck reported, "A Wet'suwet'en Nation hereditary chief leading the opposition to the construction of a B.C. pipeline has been arrested, along with dozens of others who have been protesting across Canada in solidarity with her cause. Port workers in Vancouver, railway staff in Ontario and travellers along a highway on Vancouver Island faced disruptions on Monday. Arrests mounted, including people apprehended by police in Vancouver and near Houston, B.C. RCMP arrested Freda Huson, who has been at the forefront of a campaign to prevent Coastal GasLink's \$6.6-billion pipeline from being built in territory claimed by the Wet'suwet'en, enforcing

A Review of Media Coverage of Climate Change and Global Warming in 2020

Canadian protests of pipeline construction – in part motivated by concern about climate change – made news.



Police officers clearing protesters that were blocking an entrance during a demonstration in solidarity with Wet'suwet'en hereditary chiefs opposed to construction of a natural gas pipeline across their traditional territories, in Vancouver, on February 10, 2020. Photo: Darryl Dyck, The Canadian Press.

a B.C. court injunction. Ms. Huson was among the people arrested on Monday near a crucial bridge crossing. She backs Wet'suwet'en hereditary house chiefs who are fighting Coastal GasLink's plans to transport natural gas from northeastern British Columbia to Kitimat on the coast. Coastal GasLink has said in court documents that Ms. Huson, who received the hereditary wing-chief (subchief) name Howihkat last year, is one of the two architects behind the Unist'ot'en camp that opposes the pipeline. Unist'ot'en is affiliated with Dark House, one of 13 Wet'suwet'en hereditary house groups. Lawyers for Coastal GasLink say Ms. Huson and Warner Naziel are the co-founders of the Unist'ot'en camp, which was set up in 2010 to block pipelines through the Wet'suwet'en's unceded traditional territory. By 2015, the camp had expanded to include a healing lodge".26 Adding further context, New York Times journalist lan Austen noted, "The Canadian police on Monday began moving against protesters who had set up transportation blockades around the country in sympathy with an Indigenous group's campaign to halt construction of a natural gas pipeline to Canada's West Coast. The blockades

26 https://www.theglobeandmail.com/canada/british-columbia/article-rcmp-arrest-wetsuwetennation-chief-dozens-more-in-bid-to-clear

affected at least 19,500 rail passengers, according to Via Rail Canada, and 200 freight trains were unable to travel...Protesters also effectively ended operations at major ports in Vancouver and nearby Delta, British Columbia; shut down a commuter railway line in Montreal; and blocked traffic in Regina, Saskatchewan. A small group also occupied an area outside the Ottawa office of Canada's justice minister".²⁷

In February, ecological and meteorological connections with climate issues contributed to media coverage of climate change from Antarctica to the UK. To begin, soaring and record-breaking February temperatures in Antarctica garnered media attention. CNN journalist Drew Kann reported, "The hottest temperature ever recorded in Antarctica was measured on Thursday at a remote station on the continent's Northern tip, scientists said. The temperature was nearly 65 degrees Fahrenheit (18.3 Celsius) at Argentina's Esperanza research station, scientists from the country's meteorological agency said. That surpassed the previous record of 63.5 degrees Fahrenheit (17.5 Celsius) set on March 24, 2015 at the same location. Temperature records from Esperanza date back to 1961. This means that the temperature at Esperanza was practically identical to what was felt Thursday afternoon in San Diego, California. To be fair, it is summer in the Southern Hemisphere. But it's not typical that the temperatures in Antarctica --

Soaring and record-breaking February temperatures in Antarctica garnered media attention.



Fifty-year-old Lewis Pugh is known for swimming in Arctic water to raise awareness for climate change. Source: *Reuters*.

27 https://www.nytimes.com/2020/02/10/world/canada/gas-pipeline-protests.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

one of the coldest places on Earth -- are nearly the same as those in Southern California". Meanwhile, United States (US) National Public Radio journalist Colin Dwyer observed, "It's important to note that Thursday's finding is just one data point, the result of particular weather conditions that day on the northern Antarctic Peninsula. But...the positively balmy weather this week does match up with broader changes to the climate over time, both on the peninsula and globally. Last year was the world's second hottest year on record, and it just capped Earth's hottest decade ever recorded". 29

As another illustration, many stories covered outbreaks of desert locusts in East Africa as they made connections to a changing climate. The Guardian Africa correspondent Jason Burke reported, "Massive swarms of locusts sweeping across much of east Africa have reached Uganda and Tanzania, the United Nations has said, threatening millions more people with hunger in an already fragile region. Tanzania has detected swarms in its northern border areas close to Mount Kilimanjaro and hired three planes to spray pesticide, a tactic seen as the most effective means of countering the spread of the insects. Ugandan authorities have rushed pesticides to affected areas and has mobilised thousands of troops...The outbreak in east Africa is the most serious in decades and has already devastated crops across a swath of Kenya and Somalia. Climate experts have pointed to unusually heavy rains, aided by a powerful cyclone off Somalia in December, as a major factor in the crisis. The locusts arrived from the Arabian peninsula after cyclones dumped vast amounts of rain in the deserts of Oman - creating perfect breeding conditions".30 Meanwhile, journalist Cara Anna from The Associated Press noted, "The swarms of billions of locusts have been destroying crops in Kenya, which hasn't seen such an outbreak in 70 years, as well as Somalia and Ethiopia, which haven't seen this in a quarter-century. The insects

28 https://www.cnn.com/2020/02/07/world/ antarctica-registers-hottest-temperature-on-record/ index.html

29 https://www.npr.org/2020/02/07/803835452/it-was-65-degrees-in-antarctica-this-week 30 https://www.theguardian.com/world/2020/feb/10/food-fears-grow-as-swarms-of-locusts-reachuganda-and-tanzania

"The swarms of billions of locusts have been destroying crops in Kenya, which hasn't seen such an outbreak in **70 years**, as well as Somalia and Ethiopia, which haven't seen this in a quarter-century. The insects have exploited favorable wet conditions after unusually heavy rains, and experts say climate change is expected to bring more of the same".



Desert locusts jump up from the ground and fly away as a cameraman walks past in Nasuulu Conservancy, Kenya on February 1, 2020. Photo: Ben Curtis, AP.

have exploited favorable wet conditions after unusually heavy rains, and experts say climate change is expected to bring more of the same".³¹

Meanwhile, as threats from Australian bushfires receded, media accounts documented and reflected on their relationships to climate change. For example, in an article entitled 'Droughts, Fire, Deluge: Climate's Multiplier Effect Pounds Australia', New York Times journalist Damien Cave reported, "Australia's hellish fire season has eased, but its people are facing more than a single crisis. With floods destroying homes not far from where infernos recently raged, they are confronting a cycle of what scientists call "compound extremes": one climate disaster intensifying the next. Warmer temperatures do more than just dry out the land. They also heat up the atmosphere, which means clouds hold more moisture for longer periods of time. So droughts get worse, giving way to fires, then to crushing rains that the land is too dry to absorb. One result of that multiplier effect for Australia - a global bellwether for climate change's effects – is that rebuilding after a disaster 31 https://apnews.com/3062a16869436a7eeb2b55 96c7d04278

A Review of Media Coverage of Climate Change and Global Warming in 2020

becomes far more complicated. Many Australians in disaster zones complain that their government, after dismissing climate change for years, has yet to outline recovery plans that are clear and that take future threats into account". In this piece, Cave also noted that Climate Council study found that property losses in Australia related to climate change could reach \$384 billion by the end of this decade.³²

And in the UK, media accounts of heavy rains and flooding across the country - making links to climate change - emerged in February . New York Times journalist Megan Specia reported, "Prime Minister Boris Johnson's response to a storm that battered the country over the weekend, causing severe flooding in hundreds of towns and villages, prompted a backlash from critics inside and outside his party on Monday. Mr. Johnson came under fire on Monday after his office said that he had no plans to visit any of the flooded areas after Storm Dennis...The storm dumped more than half a month's worth of rainfall in one day in some areas. Rivers overflowed their banks, sending water several feet deep through streets, houses and businesses, forcing many people to leave their homes and cutting some communities off from relief efforts. Some areas were still recovering from heavy rains and strong winds brought by another storm just a week earlier... Serious flooding is becoming a more frequent reality in Britain due to global warming, experts say".33 Furthermore, reporter Jeff Berardelli from CBS News commented, "One of the strongest storms in modern history is pummeling the North Atlantic and western Europe with massive waves and hurricane force winds. The system's name is Dennis and it comes less than a week after storm Ciara helped power a British Airways flight to a new trans-Atlantic speed record over 800 mph. Dennis is massive, spanning more than 3,000 miles in width from eastern Canada to Scandinavia. The behemoth's pressure dropped to 920 millibars near Iceland this weekend, on par with the most intense hurricanes including Hurricane Maria in 2017 and Hurricane Katrina

32 https://www.nytimes.com/2020/02/23/world/australia/climate-change-extremes.html
33 https://www.nytimes.com/2020/02/17/world/europe/britain-flooding-johnson.html

In the UK, media accounts of heavy rains and flooding across the country – making links to climate change – emerged in February.



Tenbury Wells, England, on February 17, 2020. Serious flooding is becoming a more frequent reality in Britain, experts say. Photo: Steve Parsons, *Press Association*.

in 2005. The lower the millibars – a measure of atmospheric pressure – the stronger the storm, and Dennis' barometric pressure is just 7 millibars short of the record-strongest North Atlantic nontropical storm from 1993".³⁴

Finally, media accounts in February focused on scientific themes as well. For example, new research about changing ocean currents due to a changing climate were picked up in numerous news organizations. Among them, Washington Post journalist Chris Mooney reported, "Threequarters of the world's ocean waters have sped up their pace in recent decades, scientists reported Wednesday, a massive development that was not expected to occur until climate warming became much more advanced. The change is being driven by faster winds, which are adding more energy to the surface of the ocean. That, in turn, produces faster currents and an acceleration of ocean circulation. It's the latest dramatic finding about the stark transformation of the global ocean - joining revelations about massive coral die-offs, upheaval to fisheries, ocean-driven melting of the Greenland and Antarctic ice sheets, increasingly intense ocean heat waves and accelerating sea level rise".35

³⁴ https://www.cbsnews.com/news/storm-dennis-second-massive-storm-in-two-weeks-hits-north-atlantic-and-western-europe-2020-02-16
35 https://www.washingtonpost.com/climate-environment/2020/02/05/worlds-oceans-are-speeding-up-another-mega-scale-consequence-climate-change

A Review of Media Coverage of Climate Change and Global Warming in 2020

MARCH "This is not the way to reduce emissions!"



A woman rides a bike in an otherwise empty Navona Square in Rome on March 13. Photo: Marco Di Lauro/AFP/Getty Images.

In terms of media coverage of climate change and global warming, March 2020 has demonstrated the adage of the 'finite news hole' across legacy and traditional media. Amid a global media focus on coronavirus especially as the month unfolded, media attention to climate change and global warming at the global level dropped off dramatically from February 2020 coverage, **down 36%**.

arch 2020 has been a pivotal month in human history. In terms of media coverage of climate change and global warming, March 2020 has demonstrated the adage of the 'finite news hole' across legacy and traditional media (television, newspapers and radio). Amid a global media focus on coronavirus especially as the month unfolded, media attention to climate change and global warming at the global level dropped off dramatically from February 2020 coverage, down 36%. Amid a backdrop of steadily rising levels of coverage in recent months and years, March 2020 nonetheless dropped 17% from a year earlier (March 2019). Across all regions and countries monitored, coverage in March 2020

was dramatically lower in quantity compared to coverage in March 2019. Regionally, the ongoing stream of stories in this past March decreased most in Oceania (declining 52.5%), Europe (dipping 36%), North America (falling 33%) Latin America (sliding 27%), the Middle East (lowering 24%) and Asia (descending 23%) from the previous month.

At the country levels, United States (US) newspaper coverage of climate change or global warming tumbled 28% while US television coverage slumped 43%. Meanwhile, the steepest country-level declines in March coverage from February were seen in Australia (down 61%), Norway (down 51%), Spain (down 46%), Canada (down 39%), India (down 36%),

A Review of Media Coverage of Climate Change and Global Warming in 2020

the United Kingdom (UK) (down 34%), Sweden (down 33%) and Germany (down 31%).

In March, political and economic content significantly contributed to media coverage of climate change or global warming. Prominently, in early March - before coronavirus stories began to dominate the media landscape - General Motors made news for its plans to invest heavily in manufacturing and selling new models of electric vehicles over the next years. For example, CNN journalist Peter Valdes-Dapena reported, "In a major challenge to electric car leader Tesla, General Motors announced it has created a new electric vehicle battery that offers up to 400 miles of range and will be cheaper to produce than today's batteries...The announcement was part of a broader presentation on the company's aggressive plans for electric vehicles. "GM is building toward an all-electric future because we believe climate change is real," GM CEO Mary Barra said during a presentation for media and investors. She said the company would be investing more than \$3 billion annually in electric vehicle research and development between 2020 and 2025".36

In addition, preceding and amid coronavirusdominated coverage, in March many media organizations reported on decisions by large corporations to both ramp up rhetoric about the importance of addressing climate change, and also to shift financial assets and commitments to confront it.

For example, early in March Swiss bank UBS decided to stop funding oil sands and tar sands projects as well as offshore drilling in the Arctic. Wall Street Journal reporter Dieter Holger noted, "UBS Group AG said...that it would no longer finance new offshore-oil projects in the Arctic, thermal coal mines or oil sands on undeveloped land as banks tighten their restrictions on fossil fuels amid pressure from environmentalists and investors. The Swiss bank declined to provide figures on previous projects it financed, but pointed to how its investments in carbon-related industries are falling. Assets on the bank's \$972 billion balance sheet tied to the energy and 36 https://www.cnn.com/2020/03/04/business/gmelectric-car-battery-400-miles-of-range/index.html

Preceding and amid coronavirus-dominated coverage, in March many media organizations reported on decisions by large corporations to both ramp up rhetoric about the importance of addressing climate change, and also to shift financial assets and commitments to confront it.



Swiss bank UBS has ended support for offshore drilling in the Arctic amid efforts to tackle climate change, a move that could affect future funding for oil and gas projects in Alaska. Photo: Steffen Schmidt, Keystone.

utilities sectors, excluding renewables, water and nuclear, shrunk more than 40% last year to \$1.9 billion, representing 0.8% of the bank's product exposure. It added that it would take a closer look at the environmental impact of liquefied natural gas and ultra-deepwater drilling projects before committing financing. The bank also hit its three-year sustainable-investment goal one year ahead of schedule, as measured by supporting the United Nations Sustainable Development Goals. Core sustainable investments rose to \$488 billion last year, more than doubling from 2017 to reach 13.5% of its invested assets".37 Furthermore, The Associated Press reported, "A multinational investment bank has ended support for offshore drilling in the Arctic amid efforts to tackle climate change, a move that could affect future funding for oil and gas projects in Alaska".38

At the end of March, the large European bank Barclay's - the largest funder of fossil fuels in

37 https://www.wsj.com/articles/ubs-exits-arctic-oil-coal-mines-and-tar-sands-projects-11583447745
38 https://apnews.com/06a46fe1aee6ff70a283ec2e
90a9d050

A Review of Media Coverage of Climate Change and Global Warming in 2020

Europe and the sixth-largest funder in the world - proclaimed it would zero out emissions for its investments by mid-century, while harmonizing future investments with terms of Paris Agreement targets. Among stories covering this pledge, journalist Maitane Sardon from The Wall Street Journal reported, "The British bank, which has come under fire from investors for having a weaker climate policy than some of its European rivals, said it would start with the energy and power sectors and provide targets to measure its progress in 2021... Some of the measures the bank will implement will lead to a reduction in the carbon-dioxide intensity of its power and energy portfolios of 30% and 15% respectively by 2025, Barclays Chairman Nigel Higgins said in a letter to shareholders included in the bank's annual report on environmental, social and corporate governance".39

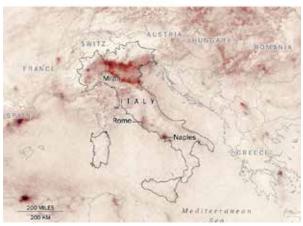
early-to-mid-March, coronavirus COVID-19) stories relating to climate change and global warming took hold. For example, early stories linking these two critical issues noted decreases in Carbon Dioxide and Nitrogen Dioxide levels (both important greenhouse gases) in hard-hit and guarantined places. Amid these data from the European Space Agency and others, and amid these stories of silverlinings in otherwise very dark clouds, journalist John Schwartz from The New York Times posed the question, "As the nation shifts abruptly into the fight against coronavirus, a question arises: could social isolation help reduce an individual's production of greenhouse gases and end up having unexpected consequences for climate change?"40 He then walked through four main ways in which coronavirus has impacted climate change: transportation, food choices, home activities and consumption (shopping) habits.

Meanwhile, Washington Post journalists Chris Mooney, John Muyskens, Brady Dennis and Andrew Freedman wrote, "First, it happened in China. Now, Italy. The coronavirus struck hard, and authorities responded with sweeping

39 https://www.wsj.com/articles/barclays-pledges-net-zero-emissions-by-2050-11585594682 40 https://www.nytimes.com/2020/03/13/climate/coronavirus-habits-carbon-footprint.html

In early to mid-March, coronavirus stories relating to climate change and global warming took hold. For example, early stories linking these two critical issues noted decreases in Carbon Dioxide and Nitrogen Dioxide levels (both important greenhouse gases) in hard-hit and quarantined places.





Source: Sentinel-5P satellite data via the European Space Agency.

interventions to keep people from spreading the disease further. As citizens hunkered down at home, businesses and roads suddenly fell empty and silent. One startling result: a decline in air pollution and greenhouse gas emissions. The Washington Post analyzed data from the European Space Agency's Sentinel-5P satellite, which can measure concentrations of greenhouse gases and other pollutants in the lower atmosphere. It shows that between Jan. 1 and March 12, concentrations of nitrogen dioxide, or NO2, fell drastically, especially over hard-hit northern Italy. Nitrogen dioxide is not one of the major greenhouse gases linked to climate change. But it is produced from combustion - by cars, power plants, and other industrial sources. So it serves as a proxy for other emissions that warm the atmosphere. It also is a pollutant that can increase the risk of asthma, inflammation of the lungs and other

A Review of Media Coverage of Climate Change and Global Warming in 2020

harmful health conditions...While the ongoing crisis has drastically slowed emissions in China, Italy and potentially elsewhere, that has offered little cause for celebration. "It is, of course, not a good thing," [Dr. Riccardo] Valentini wrote. "This is not the way to reduce emissions!"⁴¹

Furthermore, amid travel, research and event cancellations all across the world *New York Times* journalist Henry Fountain recounted, "The organizers of a climate research expedition in the frozen Arctic Ocean have canceled a series of research flights after the Norwegian government imposed travel restrictions as part of its efforts to fight the coronavirus".⁴²

In the United States context, stories increasingly focused on left-right politics relating to oil and gas as well as more climate-friendly features of a US\$2 Trillion stimulus package. For example, US National Public Radio journalist Jeff Brady reported, "Clean energy and climate advocates say the huge stimulus bill Congress is negotiating should address not only the economy, but also climate change. But a split over that appears to have contributed to delays in passing the bill". 43 The pressures of time nonetheless allowed for the passage of the bill in the Senate and House as well as a signature from US President Trump before the month's end. And while relief was provided for oil and gas producers, the package omitted relief for renewables, like tax credit extensions for wind and solar power.

Meanwhile, in late March a federal judge effectively halted construction of the Dakota Access Pipeline, marking a temporary victory for Standing Rock Sioux and supporters who have fought against this pipeline's construction. A number of media outlets reported on this development. To illustrate, Associated Press journalist Dave Kolpack reported, "A federal judge on Wednesday ordered the U.S. Army Corps of

41 https://www.washingtonpost.com/climate-environment/2020/03/13/italy-emissions-coronavirus/?arc404=true

42 https://www.nytimes.com/2020/03/16/climate/coronavirus-mosiac-arctic-research-flights.html 43 https://www.npr.org/2020/03/24/820268157/climate-change-push-fuels-split-on-coronavirus-stimulus

As March ended, the announcement came that the EPA was effectively stopping its active enforcement of pollution violations during the coronavirus pandemic. This generated substantial media attention.



One former senior EPA official called the move "a nationwide waiver of environmental rules." Photo: David J. Phillip, *The Associated Press*.

Engineers to conduct a full environmental review of the Dakota Access pipeline, nearly three years after it began carrying oil despite protests by people who gathered in North Dakota for more than a year. U.S. District Judge James Boasberg wrote that the easement approval for the pipeline remains "highly controversial" under federal environmental law, and a more extensive review is necessary than the environmental assessment that was done. Standing Rock Chairman Mike Faith called it a "significant legal win" and said it's humbling that the protests continue to "inspire national conversations" about the environment".44 Meanwhile, reporter Merrit Kennedy from US National Public Radio noted, "Nearly three years after crude oil started to flow through the controversial Dakota Access Pipeline, a federal judge has ordered the U.S. Army Corps of Engineers to conduct a full environmental review. It's a major victory for the Native American tribes and environmental groups who have been fighting against the project for years. U.S. District Judge James Boasberg has not decided whether oil can still flow in the meantime. But his opinion 44 https://apnews.com/37c60bfb22580ec7921454e

225ee5c1f

A Review of Media Coverage of Climate Change and Global Warming in 2020

Wednesday requests that the two sides submit briefings next month for and against keeping the oil moving, potentially opening the door for the judge to shut it down. The pipeline extends more than 1,000 miles from North Dakota to Illinois - but the focus of the controversy has been a small portion running under the Missouri River. Members of the Standing Rock Sioux tribe, whose reservation lies just downstream, are worried that a leak could contaminate their drinking water and sacred lands".⁴⁵

As March ended, the announcement came that the US Environmental Protection Agency (EPA) was effectively stopping its active enforcement of pollution violations during the coronavirus pandemic. This generated substantial media attention. For example, a New York Times article by Lisa Friedman entitled 'E.P.A., Citing Coronavirus, Drastically Relaxes Rules for Polluters' captured the story. Friedman noted, "Issued by the E.P.A.'s top compliance official, Susan P. Bodine, the policy sets new guidelines for companies to monitor themselves for an undetermined period of time during the outbreak and says that the agency will not issue fines for violations of certain air, water and hazardouswaste-reporting requirements. Companies are normally required to report when their factories discharge certain levels of pollution into the air or water...The order asks companies to "act responsibly" if they cannot currently comply with rules that require them to monitor or report the release of hazardous air pollution. Businesses, it said, should "minimize the effects and duration of any noncompliance" and keep records to report to the agency how Covid-19 restrictions prevented them from meeting pollution rules".46

And just before the March clock expired, the US Trump Administration released its rollbacks of car efficiency standards (that were strengthened during the Obama Administration). Just beating an April 1 deadline to make these changes, the rationale used was that a slowing of efficiency

In mid-March, the release of the United Nations 'State of the Climate Report' – among a host of revelations – that climate-related food instability and extreme weather events are increasing. Many media outlets covered this study release.



rules will make new cars less expensive thereby further stimulating a faltering economy. However, on climate terms, the slowdown is anticipated to lead to more Carbon Dioxide emissions through more fuel consumption. Among numerous stories about this Trump Administration move, Los Angeles Times journalist Anna M. Phillips wrote, "The new rules come despite the economic turmoil and growing death toll currently being caused by the coronavirus pandemic. The proposal to roll back fuel economy rules would be among the biggest steps the administration has taken to reverse an existing environmental policy. It's been pushed within the administration by officials with strong beliefs about the benefits of reducing regulations, some of whom also have long-standing ties to the fossil-fuel industry... According to a final draft sent to the White House earlier this year, the new standards will require automakers to increase fuel economy across their fleets by 1.5% a year, with a goal of achieving an average of 40 miles per gallon by 2026. That's still a major departure from current rules, which mandate annual increases of 5%, reaching an average of 54 miles per gallon by 2025... The government's cost-benefit analysis shows that even if the rollback lowers the cost of new cars - as the administration maintains it will - drivers will likely still lose money in the end by having to buy more gas. And although

⁴⁵ https://www.npr.org/2020/03/25/821643911/judge-orders-environmental-review-of-controversial-dakota-access-pipeline

⁴⁶ https://www.nytimes.com/2020/03/26/climate/epa-coronavirus-pollution-rules.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

President Trump has boasted that the new standards will spur economic growth, the administration's forecasts aren't remotely sunny. They project car companies could suffer a loss of thousands of jobs by making dirtier cars that would be locked out of many overseas markets. Two of the largest car markets in the world, China and the European Union, have set more stringent gas mileage and emissions requirements than the United States. Automakers around the world have to comply if they want to remain competitive. But economists say that if American car makers focus on building less efficient cars for the U.S. market, they could fall behind globally, and they and their suppliers could suffer".47

In March, *scientific* dimensions garnered media attention to climate change and global warming. For example, early in March, news broke about a study⁴⁸ that found that Amazonian forests possess increasingly limited ability to soak up Carbon Dioxide from the atmosphere as

atmospheric temperatures rise around the world. For example, Washington Post journalist Daniel Grossman reported, "Scientists have determined that trees in the Congo Basin of central Africa are losing their capacity to absorb carbon dioxide, raising alarms about the health of the world's second-largest contiguous rainforest and its ability to store greenhouse gases linked to climate change... Increasing heat and drought is believed to be stifling the growth of the trees in the African rainforest, a phenomenon previously noted in the Amazon. The new data provides the first large-scale evidence that tropical rainforests around the world that have been untouched by logging or other human activity are losing their potency to fight climate change". 49 As

In March, media coverage of climate stories with **ecological** and **meteorological** themes continued. To illustrate, numerous countries in East Africa were subjected to both coronavirus challenges and desert locust swarms.



A man tries to catch locusts as they swarm over Sana'a. The insects have since reached east Africa, threatening the food security of 25 million people. Photo: Mohammed Huwais/Getty Images.

another example, *Guardian* environmental correspondent noted, "Tropical forests are taking up less carbon dioxide from the air, reducing their ability to act as "carbon sinks" and bringing closer the prospect of accelerating climate breakdown. The Amazon could turn into a source of carbon in the atmosphere, instead of one of the biggest absorbers of the gas, as soon as the next decade, owing to the damage caused by loggers and farming interests and the impacts of the climate crisis..."⁵⁰

In mid-March, the release of the United Nations 'State of the Climate Report' from the World Meteorological Organization found – among a host of revelations – that climate-related food instability and extreme weather events are increasing. Many media outlets covered this study release. For example, journalists Hannah Levy and Brandon Miller from *CNN* reported, "After declining for most of the last decade, hunger is once again on the rise around the world,

50 https://www.theguardian.com/environment/2020/mar/04/tropical-forests-losing-their-ability-to-absorb-carbon-study-finds

⁴⁷ https://www.latimes.com/politics/ story/2020-03-30/trump-rolls-back-car-pollutionstandards

⁴⁸ https://www.nature.com/articles/s41586-020-2035-0.epdf

⁴⁹ https://www.washingtonpost.com/climate-environment/the-congo-rainforest-is-losing-its-ability-to-absorb-carbon-dioxide-thats-bad-for-climate-change/2020/03/03/3363d218-5ca9-11ea-9055-5fa12981bbbf_story.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

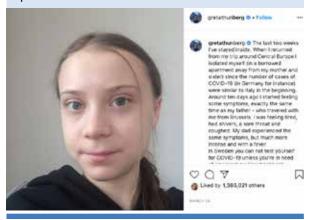
and climate change is a primary cause. Over 820 million people suffered from hunger in 2018, the greatest number since 2010 according to findings from a new World Meteorological Organization report released today. The wide-ranging State of the Climate report outlines the latest science and includes data from a variety of disciplines in order to evaluate the current and future impacts of climate change on everything from heath and global economies to food insecurity and refugee displacements. Climate variability is one of the key contributors to this increase in global disruptions due to food insecurity, displacement, and deaths from disasters. Food supplies in some of the most vulnerable regions in the world are being directly affected by impacts such as crop failures and locust swarms. Exceptional drought followed by extremely heavy rainfall markedly decreased the seasonal crop yield in the Horn of Africa during 2019. These irregular weather and climate patterns also contributed to the worst desert locust invasion in 25 years, which further threatened the crop supply in the region. As a result, by the end of 2019, over 22 million people in the Horn of Africa alone were estimated to be severely food insecure".51

Meanwhile, *CBS News* reporter Jeff Berardelli noted, "The United Nations' weather and climate agency is out with its annual State of the Climate report, and it says "the tell-tale physical signs of climate change" are everywhere. The report documents unprecedented heat waves, fires and floods over the past year, and warns that there is likely more to come".⁵²

In March, media coverage of climate stories with *ecological* and *meteorological* themes continued. To illustrate, numerous countries in East Africa were subjected to both coronavirus challenges and desert locust swarms. For example, correspondent Manfred Hartbauer from the Zimbabwean *Herald* wrote, "Swarming locusts are famous for their destructive potential. Currently, locust outbreaks in East Africa are threatening the livelihoods of hundreds of

51 https://www.cnn.com/2020/03/10/weather/climate-report-wmo-2019-wxc/index.html
52 https://www.cbsnews.com/news/un-climate-change-report-world-meteorological-organization/

Among many links made between COVID-19 and climate change in stories as the month wore on, the Instagram post by Greta Thunberg noting that after a trip to Central Europe it was "extremely likely" that she and her father contracted COVID-19. This post to her 10 million followers spilled out into numerous television, radio and print news accounts.



farmers and their families... The outbreak in East Africa started months ago and has, so far, spread into eight countries...[and] requires certain climate conditions".⁵³ As a second illustration, *Guardian* journalist Kaamil Ahmed reported, "The locust crisis that has now reached 10 countries could carry on to endanger millions more people, forecasters have said. Climate change created unprecedented conditions for the locusts to breed in the usually barren desert of the Arabian gulf, according to experts, and the insects were then able to spread through Yemen, where civil war has devastated the ability to control locust populations".⁵⁴

Finally, media accounts in March focused on *cultural* themes - interlinked with politics, economics, science and ecology - as well. For example, among many links made between 53 https://www.herald.co.zw/waging-war-on-locusts-fungus-vs-pesticides/54 https://www.theguardian.com/global-

54 https://www.theguardian.com/global-development/2020/mar/20/locust-crisis-poses-a-danger-to-millions-forecasters-warn

A Review of Media Coverage of Climate Change and Global Warming in 2020

"Of course, there's good reason for concern that despite the clean air and canals of the past three weeks, coronavirus will be a disaster for the climate... A global recession as a result of coronavirus shutdowns could also slow or stall the shift to clean energy. If capital markets lock up, it will become difficult for companies to secure financing for planned solar, wind and electric grid projects, and it could tank proposals for new projects; renewable energy projects around the world are already stumbling because of disruptions to the global supply chain." - 'What the Pandemic Means for Climate Change', The New York Times

Illustration by Cristina Daura.

has-had-coronavirus



COVID-19 and climate change in stories as the month wore on, the Instagram announcement by well-known Swedish activist Greta Thunberg noting that after a trip to Central Europe it was "extremely likely" that she and her father contracted COVID-19. This post to her 10 million followers spilled out into numerous television, radio and print news accounts. For example, Guardian journalist Matthew Taylor reported, "Greta Thunberg, the Swedish teenager who inspired the global school climate strikes, says it is "extremely likely" she has had the Covid-19 virus. The teenager, whose solo protest outside the Swedish parliament kickstarted the global youth campaign, said in a post on Instagram that she had self isolated after she and her father returned from a trip around central Europe about two weeks ago. A few days later she said they both began to feel ill, and she complained of feeling tired with "shivers, sore throat and cough". Thunberg said she had not been tested for the virus, in line with the policy in Sweden, and was now "basically recovered". But she issued an urgent warning to other young people to take the virus seriously even if they themselves were often only facing mild symptoms".55 Furthermore, journalist Somini 55 https://www.theguardian.com/world/2020/ mar/24/greta-thunberg-says-its-extremely-likely-sheSengupta from *The New York Times* noted, "She used the announcement to urge young people to stay at home, even if they don't feel sick, to protect those who are more vulnerable".⁵⁶

Amid these news stories, Reuters journalist Laurie Goering reported, "Climate activist Greta Thunberg said on Tuesday the swift and far-ranging economic and social shifts being brought in to stem the coronavirus pandemic showed that the rapid action needed to curb climate change was also possible. Officials around the world have responded to the growing coronavirus outbreak by shutting businesses, closing schools and other facilities, banning gatherings and travel, and proposing large-scale financial bailouts to keep slowing economies afloat. "The coronavirus is a terrible event ... there is no positive to come out of it," the Swedish teenager told the Thomson Reuters Foundation in an online interview. "But it also shows one thing: That once we are in a crisis, we can act to do something quickly, act fast," said Thunberg, 17, whose solo school strikes for climate action helped spark a global youth climate strike movement. "Though it must be in a different way to how we have acted in this case, 56 https://www.nytimes.com/2020/03/24/climate/ greta-thunberg-coronavirus-covid.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

we can act fast and change our habits and treat a crisis like a crisis."".⁵⁷

Regarding climate social movements pivoting to online environments, Washington Post journalist Dino Grandoni reported, "With the covid-19 pandemic forcing Americans to stay indoors, the climate movement is moving online. Plans for protests and other in-person activism, including massive marches around Earth Day next month where environmentalists wanted to raise concern over rising global temperatures, have been upended by the need for people to stay apart and stop another crisis - the emergence of a novel coronavirus that has infected more than 420,000 and killed more than 18,000 worldwide. Climate activists are now adjusting to the new reality where most of their activism, at least in the near term, must take place online to forestall the spread of the virus. Young and Internet-savvy activists at the heart of the climate movement say they're ready for the moment. "Our generation was built for this," said Stephen O'Hanlon, a co-founder of the youth-led Sunrise Movement which helped launched the Green New Deal. "We've spent our entire lives online"".58

Ending the month of March, Meehan Crist pulled many of these themes together in an opinion piece entitled 'What the Pandemic Means for Climate Change'. Crist observed, "Of course, there's good reason for concern that despite the clean air and canals of the past three weeks, coronavirus will be a disaster for the climate...A global recession as a result of coronavirus shutdowns could also slow or stall the shift to clean energy. If capital markets lock up, it will become difficult for companies to secure financing for planned solar, wind and electric grid projects, and it could tank proposals for new projects; renewable energy projects around the world are already stumbling because of disruptions to the global supply chain. (A huge share of the world's solar panels,

57 https://news.trust.org/item/20200324142122-

58 https://www.washingtonpost.com/news/powerpost/paloma/the-energy-202/2020/03/25/the-energy-202-climate-movement-moves-online-during-coronavirus-pandemic/5e7a5573602ff10d49ad36d3/

wind turbines and lithium-ion batteries are produced in China.) Going forward, a shutdown of trade between China and the United States for economic or political reasons - would also hit these projects hard. The clean energy analyst BloombergNEF has already downgraded its 2020 expectations for the solar, battery and electric-vehicle markets, signaling a slowdown in the clean energy transition when we urgently need to speed it up. If oil prices stay low, that could be bad news for the climate, too. Falling demand has converged with skittish investors spooked by the pandemic and with an oil price and production war between Russia and Saudi Arabia. Cheaper energy often leads consumers to use it less efficiently. Low prices could help depress electric-vehicle sales and make people less inclined toward projects like retrofitting homes and offices to save energy. Coronavirus is bad for the climate even on the most macro levels. Lockdowns and social distancing have slowed climate research around the world or ground it to a halt. NASA is on mandatory telework. Research flights to the Arctic have been stopped, and fieldwork everywhere is being canceled. No one knows how much climate data will never be collected as a result, or when research might be able to start up again. Gatherings of world leaders to address the climate crisis also have been delayed or canceled, and the COP26 climate summit in Glasgow planned for November could be next, meaning that the pandemic will very likely slow already sluggish international action. This could derail climate talks at a time when, under the Paris Agreement, countries are supposed to announce new pledges to reduce emissions. Such a derailment would make it even more likely that countries would blow past warming-limit goals. Going forward, public attention is likely to be diverted from the climate by ballooning fears over health and finances, and climate activism that depends on large public protests is being forced indoors and online. There is a world in which stimulus measures could outweigh shortterm impacts on energy and emissions, driving emissions up over the long term."59

59 https://www.nytimes.com/2020/03/27/opinion/sunday/coronavirus-climate-change.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

APRIL

"This historic decline in emissions is happening for all the wrong reasons..."



Empty roads in Bogota, Colombia after quarantine was imposed on the city. Photo: Raúl Arboleda/AFP via Getty.

April 2020 has marked an inflection point in our time on planet Earth. Amid these moments of history-making, media attention to climate change and global warming at the global level has continued to nose-dive, down again, this time **30%** from March 2020 coverage. The decreases in media coverage of climate change in April continue a decline from February 2020 coverage, and an overall **plummet of 59%** from the January 2020.

pril 2020 has marked an inflection point in our time on planet Earth. Amid these moments of historymaking, media attention to climate change and global warming at the global level has continued to nose-dive, down again, this time 30% from March 2020 coverage. 60 The decreases in media coverage of climate change in April continue a decline from February 2020 coverage, and an overall plummet of 59% from the January 2020. Furthermore, compared to a year earlier (April 2019), the number of news articles and segments about climate change and global warming is 40% lower. Regionally, climate change news stories in April decreased most in 60 https://sciencepolicy.colorado.edu/icecaps/ research/media_coverage/summaries/issue39.html

Africa (down 50%), followed by Oceania and Asia (both regions down 36%), then Europe and the Middle East (both down 32%) and Latin America (down 18%), yet North American coverage overall was up 7% from March 2020 (more below).

On print coverage at the country level, New Zealand newspaper attention to climate change plunged most dramatically (down 53%) from March 2020. This was followed by significant dips in print coverage in Germany (plummeting 45%), Russia (sliding 43%), Japan (slumping 40%), Australia (slipping 34%), the United Kingdom (UK) (tumbling 33%), Norway (dropping 28%), Spain (falling 24%), Sweden (sagging 23%) and Canada (descending 21%).

A Review of Media Coverage of Climate Change and Global Warming in 2020

However, United States (US) newspaper coverage bucked all these trends, with a 29% increase in April 2020 compared to March 2020, and 16% higher than a year earlier (April 2019). Keeping this in context, these numbers were still down 22% from January 2020 and down 6% from February 2020 coverage of climate change. Connections between 'coronavirus', 'Trump' and 'climate change' drove significant coverage, where 'Trump' was explicitly mentioned on average 7.5 times and 'coronavirus' or 'COVID' were 7.3 times on average in each US newspaper article on climate change (see Figure 7). Greater general attention paid to climate change and public health, as well as coverage of the US-derived 'Earth Day' events and a renewed 'Covering Climate Now' campaign were also seen to primarily drive this increase in April. Yet, attention paid to coronavirus and Trump without mention of climate change are considered to primarily drive this continued overall decrease in coverage from the January and February of this year.

As such, in the US we have detected a reemergence (detected in previous months and years)61 of a significant amount of news from US outlets on climate change or global warming associated with Donald J. Trump. We at MeCCO have referred to this as a 'Trump Dump', where media attention that would have focused on other climate-related events and issues instead was placed on Trump-related actions, leaving many other stories untold. However, in this case it may be that without the news hook of President Trump - in the face of a finite news hole filled with stories of COVID and coronavirus - even more climate change news stories in the US would have gone untold like trends around the rest of the world.

Yet, an increase in media representations of climate change was limited to print coverage. US television segments on climate change crashed in April 2020, down 45% from the previous month, and down 69% from a year earlier (April 2019). With radio, US *National Public Radio* coverage of climate change fell 59% from the previous month and 72.5% from April 2019.

61 https://sciencepolicy.colorado.edu/icecaps/research/media_coverage/summaries

increase in April 2020 compared to March 2020, and 16% higher than a year earlier. Keeping this in context, these numbers were still down 22% from January 2020 and down 6% from February 2020 coverage of climate change. Connections between 'coronavirus', 'Trump' and 'climate change' drove significant coverage, where 'Trump' was mentioned on average 7.5 times and 'coronavirus' or 'COVID' were 7.3 times on average in each article on climate change.

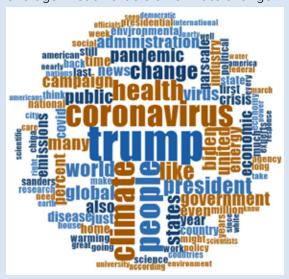


Figure 7. Word cloud showing frequency of words (4 letters or more) invoked in media coverage of climate change or global warming in United States newspaper sources in April 2020.

Moving past the quantity of coverage and digging into the content, media accounts in April drew on cultural themes, interlinked with political, economic, scientific and ecological/ meteorological themes (described below). In early April, media accounts of dramatically reduced airline travel - and consequently reduced greenhouse gas emissions - dotted the larger media landscape. Within this coverage, attention was also paid to a precipitous drop in the demand for jet fuel (the largest drop in the last 30 years). For example, Guardian journalist Oliver Milman reported, "The coronavirus outbreak has provoked a string of unsettling sights, such as the sudden widespread use of masks, shuttered businesses and deserted streets. Another unusual phenomenon is also playing out in the skies near-empty airplanes flying through the air....

A Review of Media Coverage of Climate Change and Global Warming in 2020

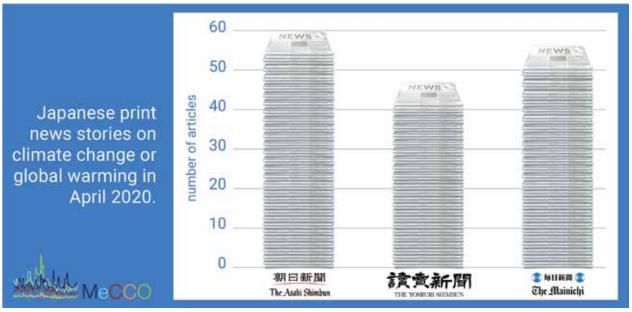


Figure 8. Japanese newspaper media coverage of climate change or global warming in print sources in *Asahi Shimbun*, *Yomiuri Shimbun*, and *Mainichi Shimbun* in April 2020.

Widespread travel restrictions around the world have slashed demand for air travel, with more than eight in 10 flights canceled. But there is a disparity in the US - while the Transportation Security Administration (TSA) has reported a 96% slump in passenger volume, to a level not seen since 1954, this hasn't been matched by the number of flights being scrapped. A spokesman for United said it was "still somewhat rare" for a single passenger to be on a flight and said that the company had made investments in more sustainable fuel to lower its carbon footprint. The commitment of airlines in general to addressing the climate crisis has been questioned during the coronavirus shutdown, however. Airlines are lobbying to rewrite the rules of a global agreement designed to tackle aviation emissions, with the coronavirus outbreak expected to make its targets tougher to meet. Campaigners accused airlines of attempting to "dodge their obligations", but the industry said it was "a matter of survival"."62

Earth Day 2020 - the 50th anniversary of the first Earth Day in 1970 - garnered media coverage with links to climate change and global warming. For example, *CBS News* journalist Sophie Lewis reported, "an ongoing 3-day live stream from 9 a.m. to 9 p.m. on April 22, 23 and 24 across

62 https://www.theguardian.com/business/2020/apr/17/us-airlines-empty-planes-coronavirus-environment

In early April, media accounts of dramatically reduced airline travel – and consequently reduced greenhouse gas emissions – dotted the larger media landscape. Within this coverage, attention was also paid to a precipitous drop in the demand for jet fuel (the largest drop in the last 30 years).



Photo of an almost-empty passenger plane. Photo: Laurel Chor, Getty Images.

streaming platforms. The stream [was] hosted by The U.S. Climate Strike Coalition and Stop The Money Pipeline Coalition, which are made up of over 500 environmental organizations. Dozens of celebrities, politicians, scientists, journalists and activists [were] participating, including Al Gore, Amber Tamblyn, Chelsea Handler, Jameela Jamil, Jane Fonda, Joaquin Phoenix, Secretary John Kerry, Mark Ruffalo, Mayor Lori

A Review of Media Coverage of Climate Change and Global Warming in 2020

Lightfoot, Representatives Alexandria Ocasio-Cortez and Rashida Tlaib".⁶³

Stories also circulated in April about how younger people seem to be capably pivoting to online environments as they continue to share their concerns about climate change. For example, Associated Press journalists Martha Irvine and Christina Larson penned a piece called 'Young climate activists slowed by pandemic, but not defeated'. They wrote, "Unable to gather en masse as they'd planned this Earth Day, these activists are planning livestreams and webinars to keep the issue of climate front and center on the world stage and in the U.S. presidential race".⁶⁴

Further adding to re-emergent cultural themes in April media coverage, the 'Covering Climate Now' project was rejuvenated around Earth Day (or more accurately Earth Week) virtual activities around the world. More than 400 outlets around planet Earth took part. example, Guardian staff noted, "Even as the coronavirus pandemic terrorizes the world, there's another global emergency the media can't afford to stop covering. Fifty years ago this week, the environmental movement staged the first Earth Day demonstration to call attention to environmental degradation and demand reform. In the half century since, climate change has emerged as an existential global threat. But there are still reasons to be hopeful... the Guardian is joining forces with hundreds of newsrooms around the world to focus attention on creative solutions to the climate emergency, from electric cars to fighting plastic waste to using psychedelic drugs... The Guardian is the lead partner in Covering Climate Now, an initiative founded last year by Columbia Journalism Review and the Nation to address the urgent need for stronger climate coverage. More than 400 newsrooms from around the world - with a combined audience nearing 2 billion people - have signed on".65

63 https://www.cbsnews.com/news/coronavirus-stuck-home-how-to-celebrate-earth-day-digitally 64 https://apnews.com/75655e14f9f9af89ebd876b 8bd01a1ff

65 https://www.theguardian.com/environment/2020/apr/19/the-guardian-joins-forces-with-hundreds-of-newsrooms-to-promote-climate-solutions

Earth Day 2020 – the 50th anniversary of the first Earth Day in 1970 – garnered media coverage with links to climate change and global warming.



Environmental activist Licypriya Kangujam, 8, stands at Juhu beach during a cleaning drive in Mumbai, India. Photo: Rajanish Kakade/AP.

In April, political and economic content continued to contribute substantially to media coverage of climate change or global warming. To begin, in the first days of April the United Nations announced that they were postponing the Conference of Parties meeting (COP26) originally scheduled to take place in November in Glasgow, Scotland. Stories abounded. For example, BBC journalist Matt McGrath reported, "A key climate summit in Glasgow will be delayed until next year due to disruption caused by the coronavirus. The announcement was made in a joint statement from the UK and UN after a "virtual" meeting of officials. Dozens of world leaders were due to attend the COP26 gathering that was set to run in Glasgow from November 9 this year. It is expected that the conference will now take place by the middle of next year".66 Washington Post reporters Brady Dennis and Chris Mooney added, "The postponement of the meeting comes as global emissions have continued to rise, although many experts now think that trend will temporarily reverse due to the pandemic and its impact on global travel, energy

66 https://www.bbc.com/news/science-environment-52122450

A Review of Media Coverage of Climate Change and Global Warming in 2020

use, and the economy. In 2019, emissions are estimated to have set a new all time high of 36.8 billion tons of carbon dioxide. To limit the planet's warming to the most stringent target of just 1.5 degrees Celsius above pre-industrial levels, emissions must fall by nearly 50 percent by the year 2030, scientists say. According to the United Nations' Environment Programme, reaching that goal means average annual cuts of 7.6 percent starting in 2020. Average temperatures on the planet have already increased more than 1 degree Celsius (1.8 degrees Fahrenheit) and triggered increasingly severe consequences, including global dieoffs of coral reefs and rapid ice loss in Greenland and Antarctica, which in turn has accelerated sea level rise. The Earth is currently on course to see more than 3 degrees Celsius (5.4. degrees Fahrenheit) of warming by the end of the century unless stronger action is taken, according to the U.N. Such continued warming could kill virtually all coral reefs, cause catastrophic flooding along coastlines and in cities, and result in more extreme weather, among other problems. The world has pledged to hold warming to "well below" 2 degrees Celsius, but it remains far off track. Altering the globe's troubling trajectory of emissions was to be the primary focus of the Scotland meeting that is now postponed. The gathering was also due to take place just after the United States formally withdraws from the Paris agreement. The coronavirus has amplified the uncertainty about the world's resolve to tackle climate change. While the outbreak has appeared to temporarily reduce pollution and damage the oil industry, it has shifted attention away from climate change and is now upending international meetings and negotiations. It is also unclear whether the economic strain of the pandemic will affect plans by countries to pour additional resources and focus into tackling climate change".67

Also in early April, the National Grid Electricity Operator - the utility that runs the UK power grid - reported that it went 19 days without using any coal power. As the UK government announced acceleration of closures of all coal plants by 2025, this was a new record, beating 67 https://www.washingtonpost.com/climate-

6/ https://www.wasningtonpost.com/climateenvironment/2020/04/01/un-climate-coronavirus-cop26/ The 'Covering Climate Now' project was rejuvenated around Earth Day virtual activities around the world. More than 400 outlets around planet Earth took part.



"Now more than ever it is important to cover one of the most pressing issues in our lifetimes," said Al Roker, who announced the collaboration on the NBC News TODAY show. Source: https://www.coveringclimatenow.org.

out 14 days in 2019. Numerous media stories discussed this new streak. For example, on April 28 NBC reporter Anmar Frangoul reported, "A new record has been set for coal-free electricity generation in Great Britain, with a combination of factors – including coronavirus related lockdown measures - playing a role...electricity system operator National Grid ESO said that all electricity generated in Britain had been produced without coal for a new record of 18 days, 6 hours and 11 minutes".68 Moreover, journalists Jillian Ambrose and Niko Kommenda noted, "The 18-day stretch has broken the UK's previous record, which was set on 4 June 2019, partly because of a collapse in demand for electricity during the coronavirus lockdown and because of greater use of solar power. The UK set a new solar power record on 20 April after solar farms generated more than 9.6GW of electricity for the first time".69

Deeper into April, the International Energy Agency (IEA) announced that the current dips

68 https://www.cnbc.com/2020/04/28/britain-hits-a-new-record-for-coal-free-electricity-generation.html

69 https://www.theguardian.com/business/2020/apr/28/britain-breaks-record-for-coal-free-power-generation

A Review of Media Coverage of Climate Change and Global Warming in 2020

in emissions related to COVID-19 reverberation have been the largest in the past decade. The IEA also projected that emissions were forecasted to drop by 8% in 2020, a drop six times greater than the drop in 2009 associated with the Great Recession. Many media outlets covered this set of announcements. For example, Washington Post journalist Steven Mufson reported, "The wide-scale restriction of movement resulting from the coronavirus pandemic is driving down global carbon dioxide emissions to levels last seen 10 years ago, according to a new report by the International Energy Agency. The world's CO₂ emissions will plunge 8 percent this year, a reduction six times as large as the previous global record set in 2009 when the financial crisis rocked the world economy, the IEA said in the report. That would be an "unprecedented rate," the report said, noting that the drop would probably be twice as large as all declines in CO, emissions since the end of World War II. But the IEA warned that the decline in CO₂ emissions was not permanent. After previous crises, the rebounds in emissions were larger than the declines. The agency said the world needed a wave of investment to restart the economy with "cleaner and more resilient energy infrastructure." The drop in carbon dioxide emissions, which are a leading cause of climate change, "is because of the premature deaths and economic trauma around the world and in my view it is absolutely nothing to cheer," Fatih Birol, executive director of the IEA, said in an interview. But, he said, from a climate and energy standpoint, "the important thing is what happens next year," and whether governments and private companies continue to invest in renewable energy. Some energy and climate experts have expressed surprise that the fall in CO2 emissions has not been even larger given the vast number of people around the world who are staying at home and away from work and other people".70

As another example, *New York Times* reporter Brad Plumer noted that "experts cautioned that the drop should not be seen as good news

70 https://www.washingtonpost.com/climate-environment/2020/04/30/coronavirus-is-driving-down-global-carbon-dioxide-emissions-levels-last-seen-10-years-ago-agency-says

In April, political and economic content continued to contribute substantially to media coverage of climate change or global warming. United Nations announced in April that they were postponing the COP26 originally scheduled to take place in November in Glasgow, Scotland.



for efforts to tackle climate change. When the pandemic subsides and nations take steps to restart their economies, emissions could easily soar again unless governments make concerted efforts to shift to cleaner energy as part of their recovery efforts. "This historic decline in emissions is happening for all the wrong reasons," said Fatih Birol, the agency's executive director. "People are dying and countries are suffering enormous economic trauma right now. The only way to sustainably reduce emissions is not through painful lockdowns, but by putting the right energy and climate policies in place".⁷¹

A related report from Carbon Brief noted that COVID-19 is leading to a more modest 2020 drop in emissions by 4% from 2019 level. Many stories covered this report as well. For example, Washington Post journalists Andrew Freedman and Lauren Tierney reported, "The coronavirus pandemic has put much of the world into lockdown, with factories going idle and city streets turning into eerily empty walkways. With the case count and death toll still climbing, it's unlikely that countries will be able to flick a switch

71 https://www.nytimes.com/2020/04/30/climate/global-emissions-decline.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

and rapidly return to pre-pandemic economic activity. But one unintended upside to this crisis has been improved air quality, particularly in the hardesthit areas where the most draconian measures have gone into force... Now, given that all but a handful of states have implemented stay-at-home orders, the air-quality shifts are also being seen in the United States. This offers a rare - and unintended - largescale experiment for scientists to see how human emissions contribute to hazardous air quality and analyze the effectiveness of particular policy ideas". Meanwhile, Guardian journalist Jonathan Watts noted, "There is no doubt that these lockdowns are hitting the fossil fuel industry. With fewer drivers on the roads and planes in the air, the price of oil has slumped almost two-thirds since last year. Car sales fell by 44% in March, with motorway traffic down 83%. So many more people are

learning to teleconference from home that the head of the Automobile Association in the UK advised the government to switch infrastructure investment from building new roads to widening internet bandwidth. This is potentially good news for the climate because oil is the biggest source of the carbon emissions that are heating the planet and disrupting weather systems. Some analysts believe it could mark the start of a prolonged downward trend in emissions and the beginning of the end for oil. Others strike a more cautious note about the fuel that has dominated our lives and polluted our atmosphere for the past century".73

In April, *scientific* dimensions of climate change more prominently grabbed media attention. For example, in early April a new *Nature* study⁷⁴ found that warning signs have emerged where

72 https://www.washingtonpost.com/weather/2020/04/09/air-quality-improving-coronavirus

73 https://www.theguardian.com/world/2020/apr/09/climate-crisis-amid-coronavirus-lockdown-nature-bounces-back-but-for-how-long

74 https://www.nature.com/articles/s41586-020-2189-9

The IEA announced that the current dips in emissions related to COVID-19 reverberation have been the largest in the past decade. The IEA also projected that emissions were forecasted to **drop by 8%** in 2020, a drop six times greater than the drop in 2009 associated with the Great Recession.



The Dave Johnson coal-fired power plant in Glenrock, Wyoming. Photo: J. David Ake/AP.

climate change is prompting species loss with particularly hard impacts in the tropics on both land and in the oceans. Guardian journalist Fiona Harvey wrote, "Wildlife species will die out and natural ecosystems collapse in the near future if the climate crisis goes unchecked, scientists have warned, as new research shows that the natural world is at far greater risk from climate breakdown than previously thought. Catastrophe could strike this decade for some species, as key temperature thresholds are crossed. Instead of the anticipated gradual decline of species, there are likely to be a series of sudden collapses. Ocean ecosystems will be first hit, as the seas have already warmed to an unprecedented extent, and problems such as lack of oxygen and an increase in acid worsen. By the 2040s, a similarly abrupt collapse is likely to spread to the land, causing devastation among key species in Indonesia, the Amazon, India, northern Australia and sub-Saharan Africa and the Congo rainforest".75

⁷⁵ https://www.theguardian.com/environment/2020/apr/08/wildlife-destruction-not-a-slippery-slope-but-a-series-of-cliff-edges

A Review of Media Coverage of Climate Change and Global Warming in 2020

Research about land-based ice loss in Greenland and Antarctica generated substantial media attention in April. First, research published in The Cryosphere found that Greenland's ice sheet experienced its largest losses on record this past summer 2019. BBC journalist Matt McGrath reported, "While high temperatures were critical to the melting seen in Greenland last year, scientists say that clear blue skies also played a key role. In a study, they found that a record number of cloud free days saw more sunlight hit the surface while snowfall was also reduced...In recent weeks, an analysis of last year's melting said the 600 billion tonnes of ice added 2.2mm to global sea levels in just two months. This new study says that while rising global temperatures played a role in the events last year, changes in atmospheric circulation patterns were also to blame. Researchers found that high pressure weather conditions prevailed over Greenland for record amounts of time".76

Second, NASA research published in Science 77 in April showed Antarctica and Greenland lost 5,000,000,000 tons of ice in the past two decades. The findings have pointed to increases in sea level rise at present and in the years to come. Many media stories covered this peerreviewed study. For example, US National Public Radio journalist Lauren Sommer reported, "As the climate has warmed, Antarctica and Greenland have lost enough ice in the last 16 years to fill Lake Michigan, according to results from a new NASA mission. Put another way, more than 5,000 gigatons of ice has melted (a gigaton equals one billion metric tons or enough to fill 400,000 Olympic-sized swimming pools), which drove up sea levels around the world...The data was measured by ICESat-2, a NASA satellite launched in 2018, which uses lasers to take detailed measurements of ice. It's the sequel to a previous satellite, ICESat, that gathered data from 2003 to 2009. Using information from both missions, researchers were able to quantify the massive scale of melting. The mission is also shedding light on what's driving the melting.

76 https://www.bbc.com/news/science-environment-52286165

77 https://science.sciencemag.org/content/early/2020/04/29/science.aaz5845

Research about land-based ice loss in Greenland and Antarctica generated substantial media attention in April.

Water-based ice loss also earned media attention in April.



Warming oceans are melting the ice around Antarctica, accelerating how much ice flows off the continent. Photo: Jeremy Harbeck, NASA.

Antarctica's ice, now sitting on land, makes a slow progression to the ocean. When it reaches the coast, it floats, creating ice shelves skirting around the continent. Those shelves are natural barriers that slow the rate of ice loss, but as they melt in a warming ocean, that barrier is shrinking. The findings show how the massive ice sheets at the far ends of the planet will affect millions of people on coastlines everywhere".⁷⁸

Water-based ice loss also earned media attention in April. In particular, a study in the journal *Geophysical Research Letters* found that ice-free Arctic summers could become the 'norm' by 2050. The study found that arctic sea ice has decreased 50% since record-keeping began in 1978. *USA Today* journalist Doyle Rice reported, "The Arctic Ocean will be ice-free in the summer within the next 30 years, a study says, which will result in "devastating consequences for the Arctic ecosystem," according to McGill University in Montreal. Sea ice is frozen ocean water that melts each summer, then refreezes each winter. The amount of summer sea ice in the Arctic has been steadily shrinking over the past few decades

78 https://www.npr.org/2020/04/30/848398472/antarctica-and-greenland-are-losing-thousands-of-gigatons-of-ice-thats-a-lot

A Review of Media Coverage of Climate Change and Global Warming in 2020

because of global warming. Since satellite records began in 1979, summer Arctic ice has lost 40% of its area and up to 70% of its volume, the Guardian said. In fact, it reached its secondsmallest level on record in 2019, the National Oceanic and Atmospheric Administration said. Sea ice affects Arctic communities and wildlife such as polar bears and walruses, and it helps regulate the planet's temperature by influencing the circulation of the atmosphere and ocean. It also affects global weather patterns... As the climate changes, the Arctic is warming more than twice as fast as the rest of the planet. Arctic air temperatures were about 3.4 degrees above average in 2019 and were the second-warmest since records began in 1900".79

Moving from ice loss and sea level rise, two prominent research publications about changing atmospheric conditions grabbed coverage. First, a publication from the American Heart Association⁸⁰ found that while climate change increases smog conditions, now about 50% of US residents live where they are exposed to unhealthy local air. They reported that this has been increasing in recent record-breaking hot years, with more heating anticipated into the future. As an example of media coverage, ABC News reporter Stephanie Ebbs wrote a story entitled 'Climate making air pollution worse, almost half of Americans exposed to unhealthy levels'. She noted, "Almost half of Americans live in communities with unhealthy levels of air pollution, according to the American Lung Association, as the country continues to grapple with a respiratory virus that has brought more attention to the impact of air pollution on people's health. The American Lung Association's "State of the Air" report found that 150 million Americans -- 45.8% of the population -- live in counties with unhealthy levels of ozone or tiny particle pollution -- essentially soot or smog. The numbers have increased in the past three reports".81

79 https://www.usatoday.com/story/news/ nation/2020/04/22/global-warming-summer-arcticsea-ice-gone-2050/2999426001

80 http://www.stateoftheair.org/key-findings 81 https://abcnews.go.com/Politics/climate-making-air-pollution-worse-half-americans-exposed/ story?id=70243567 In April media coverage of climate stories with ecological and meteorological themes continued. To illustrate, numerous media outlets took up the story that the Great Barrier Reef went through its most extensive bleaching in February and March 2020. The extent of the die-off surpassed previous widespread bleaching in 2016 and 2017.



Bleaching is when corals turn white as a stress response to warm water temperatures. It was the most widespread on the Great Barrier Reef ever recorded. Photo: Victor Huertas.

Second, a study published in Science Advances⁸² found higher leakage rates from methane emissions in the Permian Basin oilfields in Texas and New Mexico than were previously reported by US regulators. This sparked numerous print articles and television as well as radio segments. For example, CBS News journalist Jeff Berardelli reported, "Oil and gas operations in the Permian Basin, the largest oil-producing area in the United States, are spewing more than twice the amount of methane emissions into the atmosphere than previously thought - enough wasted energy to power 7 million households in Texas for a year. That's the result of a new study by researchers at Harvard University and the Environmental Defense Fund. The Permian Basin stretches across a 250-mile by 250-mile area of West Texas and southeastern New Mexico, and accounts for over a third of the crude oil and 10% of the natural gas in the U.S. 82 https://advances.sciencemag.org/content/6/17/ eaaz5120

A Review of Media Coverage of Climate Change and Global Warming in 2020

The study, published this week in the journal Science Advances, also found that the rate of leakage of methane gas makes up 3.7% of all the gas extracted in the basin, which is about 60% higher than the national average leakage rate. Methane is a potent greenhouse gas, and since the Permian Basin is so large, this excess waste is a significant contribution to our already warming climate... If the world has any hope of meeting the target for reducing emissions outlined in the Paris climate agreement, reducing CO₂ cannot accomplish this alone - the climate responds far more quickly to methane, explains Howarth. To keep the level of warming below the international goal of 2 degrees Celsius and prevent the most catastrophic impacts of climate change, controlling methane leakage is essential. Without it, humanity is bound to fall short".83

Finally, in April media coverage of climate stories with ecological and meteorological themes continued. To illustrate, numerous media outlets took up the story that the Great Barrier Reef went through its most extensive bleaching in February and March 2020. The extent of the dieoff surpassed previous widespread bleaching in 2016 and 2017. For example, CNN journalist Helen Regan reported, "Australia's Great Barrier Reef has experienced its most widespread bleaching event on record, with the south of the reef bleaching extensively for the first time, a new survey has found. This marks the third mass bleaching event on the reef in just the last five years and scientists say that the rapid warming of the planet due to human emissions of heattrapping gases are to blame. Aerial analysis conducted by Terry Hughes, director of the ARC Center of Excellence for Coral Reef Studies at James Cook University, and others from the Great Barrier Reef Marine Park Authority, found that coastal reefs along the entire length of the iconic reef -- a stretch of about 1,500 miles (2,300 kilometers) from the Torres Strait in the north, right down to the reef's southern boundary -have been severely bleached".84

83 https://www.cbsnews.com/news/methane-permian-basin-oil-gas-climate-change 84 https://www.cnn.com/2020/04/07/australia/great-barrier-reef-bleaching-2020-intl-hnk/index.html US television segments on climate change crashed in April 2020, down 45% from the previous month, and down 69% from a year earlier (April 2019). With radio, US National Public Radio coverage of climate change fell 59% from the previous month and 72.5% from April 2019.

Also in April, news of Category 5 Cyclone Harold barreling through the Pacific islands of Vanuatu and Solomon Islands generated media attention along with links to climate change and global warming. For example, journalist Matthew Cappucci from The Washington Post wrote, "Weeks into a global health emergency that has virtually brought the world to a halt, the Republic of Vanuatu is dealing with another calamity: a monster tropical cyclone that struck at an intensity equivalent to a Category 5 hurricane. The cyclone, named Harold, rammed into the archipelago Monday, packing sustained winds up to 165 mph. Vanuatu is a series of 83 islands nestled about 1,200 miles east of Brisbane, Australia, and 750 miles west of Fiji. The nation is sometimes struck by earthquakes and tropical cyclones, but Harold was on the high-end of tempests that occasionally batter the islands. While referred to as a cyclone in the western Pacific Ocean, the storm is no different from a hurricane... Water temperatures in that part of the world are also up to 2.5 degrees Fahrenheit (1.5 degrees Celsius) above average, adding fuel to the storm. Studies have shown an increase in rapid intensification events in recent decades as ocean temperatures have warmed due to climate change".85

⁸⁵ https://www.washingtonpost.com/ weather/2020/04/06/beastly-cyclone-harold-slamsinto-vanuatu-category-5-intensity

A Review of Media Coverage of Climate Change and Global Warming in 2020

MAY "No 'silver lining"



As people around the world stay home, air pollution is down and urban wildlife sightings are up. Source: Associated Press.

May 2020 has been a pivotal month in human history. Amid accelerated learning and intense behavior change, media attention to climate change and global warming at the **global level increased slightly (0.2%)** from April 2020 coverage.

ay 2020 has been a pivotal month in human history. Amid accelerated learning intense behavior change, media attention to climate change and global warming at the global level increased slightly (0.2%) from April 2020 coverage. Compared to a year earlier (May 2019), much like the precipitous drop detected April 2019-April 2020, the number of news articles and segments about climate change and global warming in May 2020 dropped dramatically as well. Coverage May 1-31, 2020 through our Media and Climate Change Observatory (MeCCO) monitoring of 120 media sources in 56 countries and ten languages all across the planet has found a 52% drop from May 1-31, 2019. Regionally, the ongoing stream of stories in this past May increased in the Middle East (up 8%), Latin America (up 28%) and Oceania (up 30%). In contrast, coverage was decreased in Asia (down nearly 1%), Africa (down 22%) and North America (down 21%) from the previous month. Also in May 2020, coverage from international wire services – *The Associated Press, Agence France Presse, The Canadian Press*, and *United Press International* – dropped 4% from the month before while contracting 63% from May 2019.

At the country level, media coverage of climate change or global warming climbed most significantly in May 2020 from the month before in Spain (up 46%), followed by Russia (up 42%), New Zealand (up 31%) Australia (up 30%), India (up 17%), Norway (up 15%), Sweden (up 7%) and Germany (up 6%). Meanwhile, coverage

A Review of Media Coverage of Climate Change and Global Warming in 2020

dropped most dramatically in Canada (plummeting 45%), the United States (US) (slumping 28% in print and 26% in television), Japan (declining 22%) and the United Kingdom (falling 7%) in May 2020 compared to the previous month of April.

Looking to content in May, scientific research and findings about various dimensions of climate change or global warming attracted ample media attention in the larger stream of overall coverage. For example, a study published in early May in the Proceedings of the National Academy of Sciences⁸⁶ found that by 2070 up to 33% of the global human population will be living in places that are inhabitable due to heat. Study authors Chi Xu, Timothy A. Kohler, Timothy M. Lenton, Jens-Christian Svenning, and Marten Scheffer pointed out that this will put particular pressure on vulnerable human communities at the forefront of climate impacts and will amplify climate-related adaptation and migration pressures. Associated Press journalist Seth Borenstein reported, "In just 50 years, 2 billion to 3.5 billion people, mostly the poor who can't afford air conditioning, will be living in a climate that historically has been too hot to handle, a new study said. With

every 1.8 degree (1 degree Celsius) increase in global average annual temperature from manmade climate change, about a billion or so people will end up in areas too warm day-in, dayout to be habitable without cooling technology, according to ecologist Marten Scheffer of Wageningen University in the Netherlands, coauthor of the study. How many people will end up at risk depends on how much heat-trapping carbon dioxide emissions are reduced and how fast the world population grows".87 Meanwhile, Environmental Editor Emma Gatten from The Telegraph in London wrote, "Humans have lived for 6,000 years in a "climate niche", in which average annual temperatures stay below 25 degrees Celsius, according to the study by

86 https://www.pnas.org/content/ early/2020/04/28/1910114117 87 https://apnews.com/ bdcdb1e537c2f23becb3960fbd4a8ed8 A research team led by Corinne LeQuéré from the University of East Anglia with the Global Carbon Project found that global **carbon dioxide emissions fell**17% during the major lockdown from the novel coronavirus pandemic. These findings were most pronounced in early April in this monitoring research conducted in 69 countries studied responsible for 97% of global emissions.

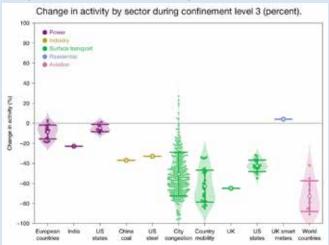


Figure 2 from C. Le Quéré et al., 2020. Temporary reduction in daily global CO₂ emissions during the COVID-19 forced confinement. *Nature Climate Change*.

scientists from China, the US and Europe. Most people live in areas with temperatures less than 15 C. That range of temperatures is likely to represent fundamental constraints on what people need to survive, such as the ability to farm, the researchers said. But temperature increases as the result of greenhouse gas emissions could leave millions living in areas as hot as the hottest parts of the Sahara by 2070..."88

Another study in early May - this appearing in *Science Advances*⁸⁹ - found that humid heat also would play a part in the next 50 years in making some parts of planet Earth (where human societies have previously survived and thrived) uninhabitable. These stark findings grabbed

88 https://www.telegraph.co.uk/news/2020/05/04/climate-change-could-push-15bn-escape-unlivable-heat

89 https://advances.sciencemag.org/content/6/19/eaaw1838

A Review of Media Coverage of Climate Change and Global Warming in 2020

media attention. For example, journalists Andrew Freedman and Jason Samenow reported, "Welcome to "Steambath Earth," featuring sauna-like temperatures and humidity too high for humans to tolerate. Extremely humid heat that is more intense than most Americans have experienced – approaching a crucial, immovable human survivability limit – has more than doubled in frequency in some coastal subtropical regions of the world since 1979... The study is the first to find that wet-bulb temperatures of 95 degrees Fahrenheit (35 Celsius) – which render ineffective the human heat response of sweating to shed heat through evaporation, leading to hyperthermia - are already occurring for short periods of time at a few weather stations. These tend to occur in parts of the Persian Gulf shoreline and coastal southwest North America, where sizzling lands border sultry seas, as well as in northern South Asia, where extreme heat and humidity combinations overlap just before the annual monsoon season begins. With computer-model projections showing the world will continue to warm rapidly in response to increasing amounts of greenhouse gases in the atmosphere, the study, published Friday in the journal Science Advances, warns that highly populated regions of the world will be rendered uninhabitable sooner than previously thought for parts of each year. This will happen unless people take wide-ranging and costly steps to adapt to the heat during the next few decades, while nations undertake measures to slash emissions of greenhouse gases. The study depicts a world steadily marching toward a future in which many other locations approach or reach that survivability threshold, a trend that could throw a spotlight on the divide between rich nations that are able to adapt to this new reality and poor countries that suffer productivity losses and deaths".90

Another study grabbing media attention in May was published in *Nature*⁹¹. A research team led by Corinne LeQuéré from the University of East Anglia with the Global Carbon Project found that global carbon dioxide emissions fell 17% during

90 https://www.washingtonpost.com/weather/2020/05/08/hot-humid-extremes-unsurvivable-global-warming

91 https://www.nature.com/articles/s41558-020-0797-x

While the impact of lockdown measures is likely to lead to the largest annual decrease in emissions since the end of World War II, 2020 is still on track to be one of the five hottest years on record, and the study notes that these reductions are no "silver lining".



Daily emissions decreased by 17% or 17 million tonnes of carbon dioxide, globally during peak confinement measures in early April, dropping to levels last seen in 2006. Photo: Getty Images.

the major lockdown from the novel coronavirus pandemic. These findings were most pronounced in early April in this monitoring research conducted in 69 countries studied responsible for 97% of global emissions. CBS News journalist Sophie Lewis reported, "Under coronavirus lockdowns, countries around the world have restricted travel and closed businesses. Flights were grounded and highways deserted. The major slowdown of movement has led to an "extreme" decline in carbon dioxide emissions – with daily levels 17% lower compared to averages from last year... daily emissions in early April, when most of the world was under strict lockdown measures, fell to levels last seen in 2006. Lockdowns could lead to an annual carbon emissions decline of up to 7% - the biggest drop since World War II, the researchers say...They point to massive decreases in transportation usage and industrial activities during the pandemic as the main sources of the decline". 92 Meanwhile, USA Today journalist Doyle Rice noted, "it is unlikely to last, according to a new analysis by an international team of scientists, who said the brief pollution break will likely be "a drop in the ocean" when it comes to climate change. This is the first analysis 92 https://www.cbsnews.com/news/carbon-

92 https://www.cbsnews.com/news/carbonemissions-fall-coronavirus-lockdowns-worldwide

A Review of Media Coverage of Climate Change and Global Warming in 2020

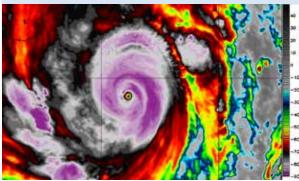
to measure the pandemic-driven global drop in carbon dioxide (CO₂) emissions from January to April of this year. Carbon dioxide, emitted from burning fossil fuels such as oil, gas and coal, is the greenhouse gas that's most responsible for global warming. It stays in the atmosphere about a century before dissipating. While the impact of lockdown measures is likely to lead to the largest annual decrease in emissions since the end of World War II, 2020 is still on track to be one of the five hottest years on record, and the study notes that these reductions are no "silver lining"⁹³.

Then, as the official hurricane season in the Caribbean Basin was set to begin June 1, a study in late May from the Proceedings of the National Academy of Sciences⁹⁴ found that humancaused climate change has been found to have fueled hurricane strengths by 8% per decade since 1980. This was a novel breakthrough in scientific understanding of hurricane intensity (not studying hurricane frequency) associated with anthropogenic climate change. example, Washington Post journalists Andrew Freedman and Jason Samenow reported, "A new study provides observational evidence that the odds of major hurricanes around the world - Category 3, 4 and 5 storms - are increasing because of human-caused global warming. The implications of this finding... are far-reaching for coastal residents, insurers and policymakers, as the most intense hurricanes cause the most damage..."We've just increased our confidence of our understanding of the link between hurricane intensity and climate change," said James Kossin, the lead author of the new study and a researcher with NOAA and the University of Wisconsin. "We have high confidence that there is a human fingerprint on these changes."95

In May, media coverage of climate stories with *ecological* and *meteorological* themes continued. Most prominently, Cyclone Amphan's movement and eventual landfall in Bangladesh near the

93 https://www.usatoday.com/story/news/ health/2020/05/19/coronavirus-has-caused-whopping-17-drop-global-carbon-emissions/5219885002

94 https://www.pnas.org/content/ early/2020/05/12/1920849117 95 https://www.washingtonpost.com/ weather/2020/05/18/hurricanes-stronger-climate-change A study in May from the *Proceedings* of the National Academy of Sciences found that human-caused climate change has been found to have **fueled hurricane strengths by 8% per decade** since 1980. This was a novel breakthrough in scientific understanding of hurricane intensity (not studying hurricane frequency) associated with anthropogenic climate change.



Super Cyclonic Storm Amphan in the Bay of Bengal on May 18, 2020. Source: Weathernerds.org.

Indian border generated numerous news reports as they drew connections between cyclones and climate change. For example, CNN journalists Ben Westcott, Vedika Sud and Manveena Suri reported, "Millions of people in India and Bangladesh are in the path of a cyclone which is due to make landfall in less than 36 hours, bringing damaging winds and heavy rain to a region already struggling with the coronavirus pandemic. Super Cyclone Amphan became the strongest storm ever recorded in the Bay of Bengal on Monday night, after intensifying with sustained wind speeds of up to 270 kilometers per hour (165 miles per hours), according to data from the US Joint Typhoon Warning Center. Amphan has weakened slightly since, but the storm is still the equivalent of a Category 3 Atlantic hurricane, with winds speeds up to 185 kph (115 mph). The US Pacific Disaster Center (PDC) said up to 33.6 million people in India could potentially be exposed to the storm's winds, while a maximum of 5.3 million could be exposed in Bangladesh. The PDC's estimate is based on data from the Joint Typhoon Warning Center."96

96 https://www.cnn.com/2020/05/19/asia/super-cyclone-amphan-india-banglash-intl-hnk/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

Furthermore, journalist Jayashri Nandi from The Hindustan Times reported that super cyclone Amphan - the first to hit the Bay of Bengal since 1999 - made landfall in West Bengal in Bangladesh with impacts on Sundarbans mangrove forests. She noted, "Roxy Mathew Koll, a climate scientist at the Indian Institute of Tropical Meteorology, said Amphan has intensified extremely rapidly compared to other cyclones. "Since satellite data is available, such rapid intensification has not been seen. Cyclones draw energy from the ocean surface. So, sea surface temperature is an important factor. We are seeing record temperatures in some parts of the Bay of Bengal. Some buoys of the Indian National Centre for Ocean Information Services have recorded maximum temperature 32 to 34 degree Celsius during the first two weeks of May. That is linked to climate change surely and is one element which makes sure rapid intensification."97

After making landfall, New York Times journalists Jeffrey Gettleman, Sameer Yasir, Kai Schultz and Hari Kumar reported, "Cyclone Amphan swept over the Bay of Bengal as the strongest cyclone ever recorded in the region. But...a phenomenon called vertical wind shear - the shifting of winds with altitude - had disrupted the storm's rotational structure, weakening it. Amphan initially grew powerful because the waters it passed over were exceedingly warm, as high as 88 degrees in parts of the Indian Ocean. Warmer water provides more energy to fuel such rotating storms. Climate change is raising ocean temperatures, but other factors, including natural variability, can play a role. While it is not possible to say whether any one specific storm like Amphan was made more powerful by climate change, scientists have long expected that tropical storms like it will increase in strength as the world warms".98

Reflecting on Cyclone Amphan along with other recent meteorological and ecological events, New York Times journalist Somini Sengupta

97 https://www.hindustantimes.com/india-news/bengal-and-odisha-brace-for-cyclone-pm-moditakes-stock/story-XfLIGsg9OMIUXl8iIIWvQN.html 98 https://www.nytimes.com/2020/05/20/world/asia/cyclone-amphan-india-bangladesh.html

Cyclone Amphan's movement and eventual landfall in Bangladesh near the Indian border generated numerous news reports as they drew connections between cyclones and climate change.



Super Cyclone Amphan became the strongest storm ever recorded in the Bay of Bengal on May 18 with sustained wind speeds of up to 270 kilometers per hour (165 miles per hours), according to data from the US Joint Typhoon Warning Center. Source: *CNN*.

noted, "The hits came this week in rapid succession: A cyclone slammed into the Indian megacity of Kolkata, pounding rains breached two dams in the Midwestern United States, and on Thursday came warning that the Atlantic hurricane season could be severe. It all served as a reminder that the coronavirus pandemic, which has killed 325,000 people so far, is colliding with another global menace: a fastheating planet that acutely threatens millions of people, especially the world's poor. Climate change makes extreme weather events more frequent and more intense. Now, because of the pandemic, they come at a time when national economies are crashing and ordinary people are stretched to their limits...The worst may be yet to come. Several other climate hazards are looming, as the coronavirus unspools its long tail around the world. They include the prospect of heat waves in Europe and South Asia, wildfires from the western United States to Europe to Australia, and water scarcity in South America and Southern Africa, where a persistent drought is already deepening hunger".99

Meanwhile, links between climate change and locusts swarms in South Asia have emerged in 99 https://www.nytimes.com/2020/05/23/climate/climate-change-coronavirus.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

May media coverage. For example, *New York Times* journalists Jeffrey Gettleman and Suhasini Raj reported, "As if India needed more challenges, with coronavirus infections steadily increasing, a heat wave hitting the capital, a recent killer cyclone and 100 million people out of work, the country now has to fight off a new problem: a locust invasion... Scientists say that this outbreak, similar to recent outbreaks in East Africa, is driven by the same factors: unusually warm weather and more rain. They blame climate change". 100

In May, our MeCCO monitoring detected further media coverage of climate change or global warming relating to political and economic content. In particular, there were many news stories about how the novel coronavirus recalibrated supply and demand for carbon-based energy sources as well as shifts to renewables. For example, New York Times journalist Brad Plumer wrote, "The United States is on track to produce more electricity this year from renewable power than from coal for the first time on record, new government projections show, a transformation partly driven by the coronavirus pandemic, with profound implications in the fight against climate change. It is a milestone that seemed all but unthinkable a decade ago, when coal was so dominant that it provided nearly half the nation's electricity. And it comes despite the Trump administration's three-year push to try to revive the ailing industry by weakening pollution rules on coal-burning power plants. Those efforts, however, failed to halt the powerful economic forces that have led electric utilities to retire hundreds of aging coal plants since 2010 and run their remaining plants less frequently. The cost of building large wind farms has declined more than 40 percent in that time, while solar costs have dropped more than 80 percent. And the price of natural gas, a cleaner-burning alternative to coal, has fallen to historic lows as a result of the fracking boom. Now the coronavirus outbreak is pushing coal producers into their deepest crisis yet". 101

100 https://www.nytimes.com/2020/05/27/world/asia/india-locusts-jaipur.html

101 https://www.nytimes.com/2020/05/13/climate/coronavirus-coal-electricity-renewables.html

There were many news stories about how the novel coronavirus re-calibrated supply and demand for carbon-based energy sources as well as shifts to renewables.



The last time the United States consumed more renewable energy than coal was in the 19th century, when hydropower was just getting started and wood burning was a major fuel source. Source: CNN.

Also in May 2020, shifts in US energy generation from coal to renewables - detected by US Energy Information Agency¹⁰² monitoring - generated ample news attention. For example, CNN journalist Matt Egan reported, "The last time the United States consumed more renewable energy than coal was in the 19th century, when hydropower was just getting started and wood burning was a major fuel source. Now, it's happening again, as the nation consumed more energy last year from renewable sources like solar and wind than from coal. This is the first time that has happened since before 1885. The milestone, announced Thursday by the US Energy Information Administration, demonstrates the dramatic shift away from coal despite President Donald Trump's promises to prop up the industry. America's coal consumption collapsed by another 15% last year to its weakest level since 1964, the EIA said. The sixth-straight year of declines for coal occurred even as Trump has slashed environmental regulations and installed a former coal lobbyist to lead the EPA. Renewable energy, by contrast, continues to boom as costs fall and climate change concerns rise. Consumption of renewable energy in the United States hit a record high last year, the fourth-straight years of growth, the EIA said."103 Meanwhile, Wall Street Journal

102 https://www.eia.gov/todayinenergy/detail.php?id=43895

103 https://www.cnn.com/2020/05/28/business coal-renewable-energy-solar-wind/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

reporter Katherine Blunt noted, "The inflection point mainly reflects a steep drop in the use of coal as source of electricity, as well as steady growth in wind and solar power, trends driven by economic as well as environmental factors".¹⁰⁴

Finally, May 2020 media accounts continued to intersect with important cultural themes. These stories demonstrate that climate change is not merely a single issue that is separate from other important scientific, political, economic, environmental and societal challenges: rather stories depicting cultural facets of climate change illustrate the intersections with pressing interrogations of asymmetrical COVID-19 impacts and with unjust race and class challenges, among others, that affect our shared human society. Among stories in these cultural spaces, climate reporting earned numerous Pulitzer Prize nominations (including from the Los Angeles Times, Wall Street Journal and New York Times) as well as a Washington Post top prize for explanatory reporting in a tenpart '2°C: Beyond the Limit' series. For example, reporter Sammy Roth from the Los Angeles Times noted, "I've always been proud to work alongside Rosanna Xia, an all-star reporter who covers the California coast. This week I'm even prouder. Rosanna was selected as a Pulitzer Prize finalist for her deeply reported story on the grim choices facing California as its beloved coastline disappears beneath a rising sea". 105 Meanwhile, in a piece noting that the climate team at her organization won a 2020 Pulitzer Prize, Washington Post journalist Sarah Kaplan pointed out that "their analysis of global climate data showed the planet is heating up unevenly. Globally, average temperatures are a little more than 1 degree Celsius (1.8 degrees Fahrenheit) warmer than in the preindustrial era. But roughly one-tenth of the world's surface area has already experienced 2 degrees Celsius of warming an amount that U.N. scientists say will trigger dangerous climate impacts. In the United

104 https://www.wsj.com/articles/u-s-consumed-more-renewables-than-coal-for-first-time-in-134-years-11590691919

105 https://www.latimes.com/environment/ newsletter/2020-05-07/boiling-point-why-climatechange-still-matters-boiling-point Climate change is not merely a single issue that is separate from other important scientific, political, economic, environmental and societal challenges: rather stories depicting cultural facets of climate change illustrate the intersections with pressing interrogations of asymmetrical COVID-19 impacts and with unjust race and class challenges, among others, that affect our shared human society.



Environmental factors including air pollution and urbanization contribute to the severity of pandemics like COVID-19. Experts warn that if we continue to destroy the environment, future pandemics could become more common. Source: Los Angeles Times.

States, more than 70 counties have passed that threshold. Over the past year, *Washington Post* journalists traveled to some of the fastest-changing places on the planet to understand why they've gotten so hot – and what that means for people who live there". ¹⁰⁶

In addition, amid coronavirus lockdowns and heightened awareness of differential impacts on the world's poor from both COVID-19 and climate change, many reporters and opinion writers increasingly connected the dots between intersectional challenges crossing cultural spaces. For example, *New York Times* opinion writer Jonathan Safran Foer stated plainly, "If you care about the working poor, about racial justice, and about climate change, you have to stop eating animals".¹⁰⁷

106 https://www.washingtonpost.com/climate-solutions/2020/05/20/climate-change-hotspots 107 https://www.nytimes.com/2020/05/21/opinion/coronavirus-meat-vegetarianism.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

JUNE

"Our racial inequality crisis is intertwined with our climate crisis. If we don't work on both, we will succeed at neither."



Ntale Eastmond, took to the protest in Central London in September 2019. Photo: https://eachother.org.uk.

In June, media attention to climate change at the global level stayed at the same levels as May 2020 coverage. However, compared to June 2019 news articles and segments about climate change in June 2020 **decreased 46%**. Regionally, the ongoing stream of stories in June increased in Asia (**up 37%**), the Middle East (**up 17%**), Europe (**up 9%**) and Africa (**up 7%**). In contrast, coverage went down in North America (**down 15.5%**), Oceania (**down 13%**) and Latin America (**down 6%**) from May 2020.

une 2020 brought us to a crossroads. Media coverage of climate change or global warming dropped dramatically from the start of the year, and remained low. In June, media attention to climate change and global warming at the global level stayed at the same levels as May 2020 coverage. However, compared to June 2019 news articles and segments about climate change and global warming in June 2020 decreased 46%. Regionally, the ongoing stream of stories in in June increased in Asia (up 37%), the Middle East (up 17%), Europe (up 9%) and Africa (up 7%). In contrast, coverage went down in North America (down 15.5%),

Oceania (down 13%) and Latin America (down 6%) from May 2020.

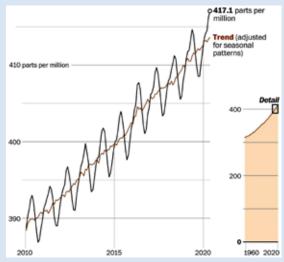
At the country level, media coverage of climate change or global warming climbed most significantly in June 2020 from the month before in Russia (up 59%), Norway (up 40%), India (up 34%), the United Kingdom (UK) (up 9%), Spain (up 7%), Canada (up 4%) and Sweden (up 2%). Meanwhile, coverage dropped most dramatically in the United States (US) (falling 28% in print and 46% in television), New Zealand (dropping 21%), Japan (plummeting 14%) and Germany as well as Australia (both dipping 9%) in June 2020 compared to May 2020.

A Review of Media Coverage of Climate Change and Global Warming in 2020

In June, scientific research and findings about various dimensions of climate change or global warming garnered media attention. For example, updates on the highest concentrations of carbon dioxide (CO₂) in the atmosphere ever recorded sparked coverage. Numerous stories pointed to evidence that recent drops emissions associated with COVID-19 quarantines did not significantly influences these CO₂ concentrations. For example, Washington Post journalists Andrew Freedman and Chris Mooney reported, "The coronavirus pandemic's economic downturn may have set off a sudden plunge in global greenhouse gas emissions, but another crucial metric for determining the severity of global warming the amount of greenhouse gases actually in the air – just hit a record high. According to readings from the Scripps Institution of Oceanography and the National Oceanic and Atmospheric Administration (NOAA), the amount of CO₂ in the air in May 2020 hit an average of slightly greater than 417 parts per million (ppm). This is the highest monthly average value ever recorded, and is up from 414.7 ppm in May of last year. Carbon dioxide levels are the highest they've been in human history, and probably are the highest in 3 million years. The last time there was this much CO, in the atmosphere, global average surface temperatures were significantly warmer than they are today, and sea levels were 50 to 80 feet higher. The continuing rise in CO₂ concentrations in the atmosphere may sound surprising in light of recent findings that the pandemic, and the associated lockdowns, had led to a steep drop in global greenhouse gas emissions, peaking at a 17 percent decline in early April. But the total amount of CO, that winds up in the atmosphere is driven not only by human emission levels, but also through processes on the land surface (especially forests) and in the oceans that fluctuate on a yearly basis. According to a Scripps news release announcing the findings, CO₂ emissions reductions on the order of 20 to 30 percent would need to be sustained for six to 12 months in order for the increase in atmospheric CO, to slow in a detectable way."108

108 https://www.washingtonpost.com/weather/2020/06/04/carbon-dioxide-record-2020

Updates on the highest concentrations of CO₂ in the atmosphere ever recorded sparked coverage. Numerous stories pointed to evidence that recent drops in emissions associated with COVID-19 quarantines did not significantly influences these CO₂ concentrations.



Mauna Loa Observatory measured a record monthly average atmospheric carbon dioxide concentration in May, typically the peak of the year. Source: NOAA Global Monitoring Laboratory.

Moreover, research new connecting deforestation and climate change also generated media attention. In particular, findings from World Research Institute's Global Forest Watch program permeated public conversations. For example, in an article entitled 'Climate Change: Older Trees Loss Continue around the World' BBC journalist Matt McGrath wrote, "Older, carbon-rich tropical forests continue to be lost at a frightening rate, according to satellite data. In 2019, an area of primary forest the size of a football pitch was lost every six seconds, the University of Maryland study of trees more than 5 metres says. Brazil accounted for a third of it, its worst loss in 13 years apart from huge spikes in 2016 and 2017 from fires. However, Indonesia and the Democratic Republic of Congo both managed to reduce tree loss. Meanwhile, Australia saw a sixfold rise in total tree loss, following dramatic wildfires late in

A Review of Media Coverage of Climate Change and Global Warming in 2020

2019". 109 As another example of coverage, Agence-France Presse reporter Marlow Hood - writing in the Jakarta Post - noted, "Vast tracts of pristine rainforest on three continents went up in smoke last year, with an area roughly the size of Switzerland cut down or burned to make way for cattle and commercial crops... The 38,000 square kilometers destroyed in 2019 -- equivalent to a football pitch of old-growth trees every six seconds -- made it the third most devastating year for primary forests since the scientists began tracking their decline two decades ago. Tropical ecosystems are vulnerable to both climate change and extractive exploitation".110

In June, media coverage of climate stories also drew on *ecological* and *meteorological* themes. For instance, *NBC News* reporter Emma Newberger noted that "The Earth had its hottest May ever last month, continuing an unrelenting climate change trend as 2020 is set to be among the hottest 10 years ever, scientists with the Copernicus Climate Change Service announced... It's virtually certain that this year will be among the top hottest years in recorded history with a higher than 98% likelihood it will rank

in the top five, according to the National Oceanic and Atmospheric Administration ".111

As another example, high temperatures in Siberia following a warm winter in that part of the Northern Hemisphere grabbed media headlines and stories. For example, *Guardian* journalist Damian Carrington wrote, "A prolonged heatwave in Siberia is "undoubtedly alarming", climate scientists have said. The freak temperatures have been linked to wildfires, a huge oil spill and a plague of tree-eating moths. On a global scale, the Siberian heat is helping push the world towards its hottest year

109 https://www.bbc.com/news/science-environment-52881721

110 https://www.thejakartapost.com/life/2020/06/02/football-pitch-of-rainforest-destroyed-every-six-seconds-study.html

111 https://www.cnbc.com/2020/06/05/climate-change-may-2020-is-hottest-month-on-record.html

"The Earthhadits hottest Mayever last month, continuing an unrelenting climate change trend as 2020 is set to be among the hottest 10 years ever, scientists with the Copernicus Climate Change Service announced... It's virtually certain that this year will be among the **top hottest years** in recorded history with a higher than 98% likelihood it will rank in the top five, according to the National Oceanic and Atmospheric Administration".

- Emma Newberger, NBC News



The sun sets behind the Statue of Liberty as it is partially obscured by heat waves from the exhaust of a passing ferry on May 31, 2020 in New York City. Photo: Gary Hershorn/Getty Images.

on record in 2020, despite a temporary dip in carbon emissions owing to the coronavirus pandemic. Temperatures in the polar regions are rising fastest because ocean currents carry heat towards the poles and reflective ice and snow is melting away. Russian towns in the Arctic circle have recorded extraordinary temperatures, with Nizhnyaya Pesha hitting 30C on 9 June and Khatanga, which usually has daytime temperatures of around 0C at this time of year, hitting 25C on 22 May. The previous record was 12C. In May, surface temperatures in parts of Siberia were up to 10C above average". 112

In June, our MeCCO monitoring also detected *political* and *economic* media coverage of climate change or global warming. In particular, early in the month the US Trump Administration issued an Executive Order to roll back environmental rules 112 https://www.theguardian.com/environment/2020/jun/17/climate-crisis-alarm-at-

environment/2020/jun/17/climate-crisis-alarm-at-record-breaking-heatwave-in-siberia

A Review of Media Coverage of Climate Change and Global Warming in 2020

relating to energy project constructions as they relate to climate change and local air pollution regulations. example, New York Times journalists Coral Davenport and Lisa Friedman reported, "President Trump signed an executive order that calls on agencies to waive required environmental reviews of infrastructure projects to be built during the pandemic-driven economic crisis. At the same time, the Environmental Protection Agency has proposed a new rule that changes the way the agency uses cost-benefit analyses to enact Clean Air Act regulations, effectively limiting the strength of future air pollution controls. Together, the actions signal that Mr. Trump intends to speed up his efforts to dismantle environmental regulations as the nation battles the coronavirus and a wave of unrest protesting the deaths of black Americans in Georgia, Minnesota and Kentucky. They will also help define the stakes in the 2020 presidential election, since neither effort would likely survive a Democratic

victory. By changing the way the government weighs the value of the public health benefits, Andrew Wheeler, the E.P.A. administrator, would allow the agency to justify weakening clean air and climate change regulations with economic arguments. Mr. Trump's executive order would use "emergency authorities" to waive parts of the cornerstone National Environmental Policy Act to spur the construction of highways, pipelines and other infrastructure projects. Environmental activists and lawyers questioned the legality of the move and accused the administration of using the coronavirus pandemic and national unrest to speed up actions that have been moving slowly through the regulatory process".¹¹³

Politics and economics also threaded through many stories of a struggling fossil fuel industry in the context of COVID-19 challenges. For example, in Australia *Sydney Morning Herald* journalists David Crowe and Mike Foley wrote, "A new wave of spending on energy projects 113 https://www.nytimes.com/2020/06/04/climate/trump-environment-coronavirus.html

"BP has announced plans to **cut 10,000 jobs** following a global slump in demand for oil because of the coronavirus crisis. The oil giant had paused redundancies during the peak of the pandemic but told staff on Monday that around 15% will leave by the end of the year. BP has not said how many jobs will be lost in the UK but it is thought the figure could be close to 2,000. Chief executive Bernard Looney blamed a drop in the oil price for the cuts".



British Petroleum says 300,000-500,000 barrels a day are at risk in 2020. Photo: AFP.

to cut Australia's carbon emissions is on the way under a contentious federal government plan that sidelines coal but highlights gas as a key fuel for the future. Vowing to build on more than \$10 billion already spent on clean energy, the Morrison government will name electric vehicles, batteries, renewables and gas as some of the key technologies it will support". 114 Meanwhile, in the UK BBC reported, "BP has announced plans to cut 10,000 jobs following a global slump in demand for oil because of the coronavirus crisis. The oil giant had paused redundancies during the peak of the pandemic but told staff on Monday that around 15% will leave by the end of the year. BP has not said how many jobs will be lost in the UK but it is thought the figure could be close to 2,000. Chief executive Bernard Looney blamed a drop in the oil price for the cuts". 115

114 https://www.smh.com.au/politics/federal/morrison-government-climate-action-plan-hot-ongas-cool-on-coal-20200520-p54uw9.html
115 https://www.bbc.com/news/explainers-52966609

A Review of Media Coverage of Climate Change and Global Warming in 2020

Cultural stories in June 2020 made important links between racism and differential vulnerability to risks and hazards associated with climate change or global warming.

"Racial and economic inequities need to be tackled as this country seeks to recalibrate its economic and social compass in the weeks and months to come. Racism, in short, makes it impossible to live sustainably".

- Somini Sengupta, The New York Times

Protesters march on June 15, 2020 in New York City. Photo: Getty Images.



Cultural themes also wove through many June climate change or global warming stories. These stories continued to demonstrate that climate change is not merely a single issue that is separate from other important scientific, political, economic, environmental and societal challenges: rather stories depicting cultural facets of climate change illustrate the intersections with pressing interrogations of asymmetrical COVID-19 impacts and with unjust race and class challenges, among others, that affect our shared human society. To illustrate, stories addressed efforts to undermine climate science in federal agencies like the US Environmental Protection Agency. For example, New York Times journalist Lisa Friedman reported that "efforts to undermine climate change science in the federal government, once orchestrated largely by President Trump's political appointees, are now increasingly driven by midlevel managers trying to protect their jobs and budgets and wary of the scrutiny of senior officials, according to interviews and newly revealed reports and surveys". 116 She continued, "Government experts said they have been surprised at the speed with which federal workers have internalized President Trump's antagonism for climate science, and called the new landscape dangerous". 117

Furthermore, cultural stories in June 2020 made important links between racism and differential vulnerability...to. risks and hazards associated

116 https://www.epa.gov/sites/production/files/2020-05/documents/_epaoig_20200520-20-p-0173.pdf

117 https://www.nytimes.com/2020/06/15/climate/climate-science-trump.html

with climate change or global warming. In other words, the police killing of George Floyd in the US prompted many re-considerations of historically unequal burdens placed on disadvantaged and marginalized communities by climate changing activities. For example, writing in The Washington Post, climate scientist Ayana Elizabeth Johnson wrote that "the sheer magnitude of transforming our energy, transportation, buildings and food systems within a decade, while striving to reach net zero greenhouse gas emissions shortly thereafter, is already overwhelming. And black Americans are disproportionately more likely than whites to be concerned about - and affected by - the climate crisis. But the many manifestations of structural racism, mass incarceration and state violence mean environmental issues are only a few lines on a long tally of threats... I need you to understand that our racial inequality crisis is intertwined with our climate crisis. If we don't work on both, we will succeed at neither". 118 As a second example, New York Times journalist Somini Sengupta interviewed 'prominent environmental defenders' about connections between anti-racism and 21st century climate change. She observed, "Racial and economic inequities need to be tackled as this country seeks to recalibrate its economic and social compass in the weeks and months to come. Racism, in short, makes it impossible to live sustainably". 119

118 https://www.washingtonpost.com/ outlook/2020/06/03/im-black-climate-scientistracism-derails-our-efforts-save-planet

119 https://www.nytimes.com/2020/06/03/climate/black-environmentalists-talk-about-climate-and-antiracism.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

JULY "A symptom of human-induced climate change"



Floodwaters in Bogura, Bangladesh, near the Brahmaputra River, in mid-July. Photo: Mohammad Ponir Hossain/Reuters.

July 2020 has seen a **5% uptick** in media coverage of climate change but still at levels **37% lower** than a year ago. While that represents somewhat of a rebound, media coverage of climate change remained at lower levels than the quantity of coverage at the start of 2020 as well as during the previous Northern Hemisphere summer of 2019.

uly 2020 saw a 5% uptick in media coverage of climate change or global warming, but still at levels 37% lower than a year ago (July 2019). While that represents somewhat of a rebound, media coverage of climate change or global warming remained at lower levels than the quantity of coverage at the start of 2020 as well as during the previous Northern Hemisphere summer of 2019. Regionally, the changes in quantity of ongoing stream of stories in July as compared to June 2020 was mixed: the number of articles in Latin American and African sources were up slightly (+0.5% and +1.5% respectively), while up more in North American, Asian and Middle Eastern sources (+9%, +12% and +31% respectively); meanwhile the amount of climate change coverage was down

slightly in Europe (-3.5%) while down a bit more in Oceania (-8%).

At the country level, media coverage of climate change or global warming has also seen mixed trends in July 2020 compared to June 2020. For examples, coverage was up more dramatically in United States (US) print and televisions coverage (up 36% and %148 respectively). That said, US print and television coverage remained 29% and 68% lower than levels in July 2019. Elsewhere, coverage in *The Associated Press, Agence France Presse, The Canadian Press,* and *United Press International* wire services was up 40% in July 2020 from a month before, yet still down 36% from July 2019. Meanwhile, coverage in *Süddeutsche Zeitung* and *Die Tageszeitung* in

A Review of Media Coverage of Climate Change and Global Warming in 2020

Germany was up 29% in July from June 2020, but still about half the amount of coverage that was in those sources in July 2019. Also at the country level, only in Japanese coverage - Asahi Shimbun, Yomiuri Shimbun, and Mainichi Shimbun - were the quantities of news articles on climate change or global warming both higher than a year ago (July 2019) and the previous month (June 2020) (up 19% and up 67% respectively). In all other countries monitored (in addition to the aforementioned coverage in the US, Germany and Japan) through the Media and Climate Change Observatory (MeCCO) - Australia, Canada, India, New Zealand, Norway, Russia, Spain, Sweden and the United Kingdom (UK) - coverage remained at lower levels in July 2020 as compared to July 2019 (see our MeCCO website for more details: http://mecco.colorado.edu.

Moving to the content of coverage, in July ecological and meteorological themes drove media coverage of climate change or global warming. For instance, assessments of historical temperatures and ties to a changing climate attracted media attention. As an illustration, Associated Press reporters Nadine Achoui-Lesage and Frank Jordans observed, "The world could see annual global temperatures pass a key threshold for the first time in the coming five years, the U.N. weather agency said Thursday. The World Meteorological Organization said forecasts suggest there's a 20% chance that global temperatures will be 1.5 degrees Celsius (2.7 Fahrenheit) higher than the pre-industrial average in at least one year between 2020 and 2024. The 1.5 C mark is the level countries agreed to cap global warming at in the 2015 Paris accord. While a new annual high might be followed by several years with lower average temperatures, breaking that threshold would be seen as further evidence that international efforts to curb climate change aren't working". 120 Meanwhile, CNN journalist Amy Woodyatt reported, "In 2020, the Arctic is likely to have warmed by more than twice the global mean, and many parts of South America, southern Africa and Australia are likely to be dryer than in the recent past, the WMO said. There is a 120 https://apnews.com/40c53c57860109143a9ed4 4393dab3c3

Coverage was up more dramatically in US print and televisions coverage (**up 36%** and **%148** respectively). That said, US print and television coverage remained **29%** and **68%** lower than levels in July 2019.

Coverage in wire services was up 40% in July 2020 from a month before, yet still down 36% from July 2019.

70% chance that one or more months during the next five years will be at least 1.5 degrees Celsius warmer than pre-industrial levels, the WMO assessment said. In the coming five years, almost all regions are likely to be warmer than the recent past, scientists warned. Over 2020-2024, eastern parts of South America are likely to be dryer, high latitude regions and the Sahel are likely to be wetter, and the northern North Atlantic region could have stronger westerly winds, which could lead to more storms in western Europe".121

Further into July, extreme heat in Russia, in the USA and in other corners of the world attracted media stories as they related to climate change. For example, Associated Press journalist Seth Borenstein reported, "Nearly impossible without man-made global warming, this year's freak Siberian heat wave is producing climate change's most flagrant footprint of extreme weather, a new flash study says. International scientists released a study Wednesday that found the greenhouse effect multiplied the chance of the region's prolonged heat by at least 600 times, and maybe tens of thousands of times. In the study, which has not yet gone through peer review, the team looked at Siberia from January to June, including a day that hit 100 degrees (38 degrees Celsius) for a new Arctic record. Scientists from the United Kingdom, Russia, France, Netherlands, Germany and Switzerland used 70 climate models running thousands of complex simulations comparing

121 https://www.cnn.com/2020/07/09/world/global-temperatures-wmo-climate-intl-scli/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

current conditions to a world without man-made warming from the burning of coal, oil and gas. They found that without climate change the type of prolonged heat that hit Siberia would happen once in 80,000 years, "effectively impossible without human influence," said study lead author Andrew Ciavarella, a scientist at the UK Met Office".¹²²

Pivoting to extreme events, the comparatively active Atlantic hurricane season starting in May 2020 generated journalists' time and attention. For example, Washington Post journalists Matthew Cappucci, Andrew Freedman and Jason Samenow wrote, "Hanna, the first hurricane of the 2020 Atlantic season, is barging into South Texas unleashing wind gusts over 100 mph, torrential rain, and storm surge inundation along the coast. The storm officially made landfall at 5:00 p.m. central over Padre Island, Texas. It comes as Pacific storm Hurricane Douglas bears down on Hawaii and as two other systems whirl out over the Atlantic during what it is expected to be an abnormally active season. A record number of storms have already occurred to this point...As a whole, the tropics are blistering with activity, in stark contrast to the ominous quiescent that enveloped the Atlantic Basin just one week ago. Hanna's formation on Thursday evening demolished the previous record for a season's earliest "H" storm - formerly held by Tropical Storm Harvey, which formed on Aug. 3, 2005 as the latest domino to topple in a record-busy start to hurricane season. The season has already featured the earliest "C," "E," "F" and "G" storms on record - Cristobal, Edouard, Fay and Gonzalo. A season's eighth named storm typically doesn't develop until closer to late September. As the season's first hurricane, Hanna comes about two weeks early. The average first hurricane in the Atlantic basin forms around Aug. 10. Hanna's central pressure, which dropped to at least 973 millibars, marks the lowest pressure for a storm in the Gulf of Mexico during July since Hurricane Alex in 2010. The lower the pressure the strong the storm in most cases. Atmospheric scientists had been warning that the 2020 Atlantic hurricane season could be a hectic one, 122 https://apnews.com/527ac4ec97e62a49a55af7c 77e96d3c8

"The world could see annual global temperatures pass a key threshold for the first time in the coming five years, the U.N. weather agency said Thursday. The World Meteorological Organization said forecasts suggest there's a 20% chance that global temperatures will be 1.5 degrees Celsius higher than the pre-industrial average in at least one year between 2020 and 2024". - The Associated Press



In this April 22, 2020 photo, firefighters work at a forest fire in a burned national park at the Dutch-German border near Herkenbosch, Netherlands. Photo: Martin Meissner/AP.

with large-scale atmospheric circulations and patterns, like a developing La Niña, favoring an increased number of storms. Meanwhile, ultrawarm waters could help make those that form more intense and wetter, with a greater potential for storms to undergo rapid intensification. The warming seas are largely a symptom of human-induced climate change".¹²³

In later July, flooding in Asia drew media attention as it related to climate change and global warming links. For example, journalists Somini Sengupta and Julfikar Ali Manik reported, "torrential rains have submerged at least a quarter of Bangladesh, washing away the few things that count as assets for some of the world's poorest people – their goats and chickens, houses of mud and tin, sacks of rice stored for the lean season. It is the

123 https://www.washingtonpost.com/weather/2020/07/25/hurricane-hanna-texas

A Review of Media Coverage of Climate Change and Global Warming in 2020

latest calamity to strike the delta nation of 165 million people. Only two months ago, a cyclone pummeled the country's southwest. Along the coast, a rising sea has swallowed entire villages. And while it's too soon to ascertain what role climate change has played in these latest floods, Bangladesh is already witnessing a pattern of more severe and more frequent river flooding than in the past along the mighty Brahmaputra River, scientists say, and that is projected to worsen in the years ahead as climate change intensifies the rains...The Brahmaputra is a fearsome, shape-shifting 2,400-mile river that erupts from the Tibetan Himalayas and spills into northeastern India before merging with the Ganges in Bangladesh and emptying into the Bay of Bengal. It irrigates vast areas of farmland but it's also unpredictable, often swallowing the islands that form within it...Climate change, too, is altering its fate - and that of the people who live along its banks".124 Meanwhile, Guardian journalist Graham Readfearn noted, "The combined impacts of human-caused sea level rise, storm surges and high tides could expose an extra 23 million people to coastal flooding within the next 30 years, even with relatively ambitious cuts to greenhouse gas emissions". 125

In July, there were also many media stories about *scientific* research and findings about aspects of climate change or global warming. To begin, in early July a research output from *Nature*¹²⁶ found that agricultural practices have the potential to pull greenhouse gases from the atmosphere. This sparked media attention. For example, journalist Damian Carrington from *The Guardian* reported, "Spreading rock dust on farmland could suck billions of tonnes of carbon dioxide from the air every year, according to the first detailed global analysis of the technique. The chemical reactions that degrade the rock particles lock the greenhouse gas into carbonates within months,

124 https://www.nytimes.com/2020/07/30/climate/bangladesh-floods.html

125 https://www.theguardian.com/ environment/2020/jul/31/extra-23-million-peoplecould-face-coastal-flooding-within-30-years-evenwith-emission-cuts-study-says

126 https://www.nature.com/articles/s41586-020-2448-9

Coverage in Germany was **up 29%** in July from June 2020, but still about half the amount of coverage that was in those sources in July 2019.

Only in Japanese coverage were the quantities of news articles on climate change both higher than a year ago and the previous month (up 19% and up 67% respectively).

and some scientists say this approach may be the best near-term way of removing CO2 from the atmosphere. The researchers are clear that cutting the fossil fuel burning that releases CO₂ is the most important action needed to tackle the climate emergency. But climate scientists also agree that, in addition, massive amounts of CO, need to be removed from the air to meet the Paris agreement goals of keeping global temperature rise below 2c. The rock dust approach, called enhanced rock weathering (ERW), has several advantages, the researchers say. First, many farmers already add limestone dust to soils to reduce acidification, and adding other rock dust improves fertility and crop yields, meaning application could be routine and desirable. Basalt is the best rock for capturing CO2, and many mines already produce dust as a byproduct, so stockpiles already exist. The researchers also found that the world's biggest polluters, China, the US and India, have the greatest potential for ERW, as they have large areas of cropland and relatively warm weather, which speeds up the chemical reactions. The analysis, published in the journal Nature, estimates that treating about half of farmland could capture 2bn tonnes of CO₂ each year, equivalent to the combined emissions of Germany and Japan. The cost depends on local labour rates and varies from \$80 per tonne in India to \$160 in the US, and is in line with the \$100-150 carbon price forecast by the World Bank for 2050, the date by which emissions must reach net zero to avoid catastrophic climate breakdown". 127

127 https://www.theguardian.com/ environment/2020/jul/08/spreading-rock-dust-onfields-could-remove-vast-amounts-of-co2-from-air

A Review of Media Coverage of Climate Change and Global Warming in 2020

Further into July, research that examined methane emissions garnered media attention. Specifically, an Environmental Research Letters study¹²⁸ found concentrations at historic highs. For example, journalist Jonathan Watts from The Guardian wrote, "Animal farming and fossil fuels have driven global emissions of the potent greenhouse gas methane to the highest level on record, putting the world on track for dangerously increased heat levels of 3C to 4C. Since 2000 discharges of the odourless, colourless gas have risen by more than 50m tonnes a year, equivalent to 350m cars or double the total emissions of Germany or France, according to the latest Methane Budget study by a global team of scientists. The findings...show that more than half of the methane in the atmosphere now comes from human sources. Of this share, ranching, agriculture and landfills account for about two-thirds, while the fossil fuel industry, composed of oil, gas and coal, makes up the rest. Methane is second only to carbon dioxide in its contribution to global heating; the gas is released in much smaller quantities but is 28 times more powerful at trapping warmth over a 100-year span. In 2017, the most recent year for which data is available, the planet's atmosphere absorbed almost 600m tonnes of methane, up 9% from the early years of the century when concentrations were relatively stable". 129 As another example, New York Times journalist Hiroko Tabuchi noted, "Curbing methane emissions will require better plugging leaks and other fugitive emissions from oil and gas infrastructure, like wells and pipelines, which are a major source of methane emissions, the scientists said. It will also require an overhaul of agriculture, especially cattle and rice farming, two large sources of methane emissions. A big question mark is the contribution of natural sources of methane emissions, like wetlands, mud volcanoes and permafrost. Natural methane emissions have been relatively unchanged from 2000-17, albeit with large uncertainties. There are fears, for example, that thawing permafrost in the Arctic could start releasing large quantities of methane into the atmosphere, further

128 https://iopscience.iop.org/ article/10.1088/1748-9326/ab9ed2 129 https://www.theguardian.com/ environment/2020/jul/14/livestock-farming-andfossil-fuels-could-drive-4c-global-heat-rise Extreme heat in Russia, in the US and in other corners of the world attracted media stories as they related to climate change. For example, Associated Press reported, "Nearly impossible without manmade global warming, this year's freak Siberian heat wave is producing climate change's most flagrant footprint of extreme weather".



This June 21, 2020 photo shows an outdoor thermometer indicating 30 Celsius (86 Fahrenheit) around 11 p.m in Verkhoyansk, Sakha Republic, about 4,660 kilometers (2,900 miles) northeast of Moscow, Russia. Photo: Olga Burtseva, *AP*.

accelerating climate change. For now, scientists have found little evidence of increasing methane emissions in the Arctic, though they warn that could change as warming intensifies. Scientists have warned that the Arctic region is warming at more than twice the rate of the rest of the planet. "The key message is that methane concentrations and emissions are still rising, and we know the main cause," said Marielle Saunois, a scientist at the Laboratory for Climate and Environmental Sciences in France, and a member of the research team. "This is not the right path". 130

130 https://www.nytimes.com/2020/07/14/climate/methane-emissions-record.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

In addition, in July, a Nature Climate Change study¹³¹ of sea ice loss caused by global warming attracted media stories. For example, BBC journalists Helen Briggs and Victoria Gill reported, "Polar bears will be wiped out by the end of the century unless more is done to tackle climate change, a study predicts. Scientists say some populations have already reached their survival limits as the Arctic sea ice shrinks. The carnivores rely on the sea ice of the Arctic Ocean to hunt for seals. As the ice breaks up, the animals are forced to roam for long distances or on to shore, where they struggle to find food and feed their cubs". 132 As another example, journalist Drew Kann from CNN wrote, "For many people, there is one animal that comes to mind when they think of creatures threatened by climate change: the polar bear. In recent years, images of emaciated bears searching desperately for food have made the Arctic's apex predator the poster child for the effects of global warming. Now, as the planet continues to warm rapidly, a new study brings another dire warning: If humans fail to reduce greenhouse gas emissions, most populations of the iconic species could struggle to

survive beyond 2100. Already, some populations have likely crossed key thresholds that will make their survival difficult, and perhaps impossible...

July also was a month where *political* and *economic* media coverage of climate change or global warming was evident. In particular, stories of pipeline pressures and conflicts in North America - relating to climate change pressures

131 https://www.nature.com/articles/s41558-020-0818-9

132 https://www.bbc.com/news/science-environment-53474445

133 https://www.cnn.com/2020/07/20/weather/polar-bears-survival-threatened-arctic-climate-change/index.html

Research that examined methane emissions garnered media attention. Specifically, an Environmental Research Letters study found concentrations at historic highs. For example, The Guardian wrote, "Animal farming and fossil fuels have driven global emissions of the potent greenhouse gas methane to the highest level on record, putting the world on track for dangerously increased heat levels of 3°C to 4°C.



A cattle ranch in California. In 2017 the Earth's atmosphere absorbed almost 600m tons of methane from all sources, up 9% from the early years of the century. Photo: Lucy Nicholson/*Reuters*.

- shaped media narratives. For example, early in the month Washington Post journalists Juliet Eilperin, Steven Mufson and Brady Dennis wrote, "A number of recent legal defeats and business decisions have stymied three multibillion-dollar pipeline projects around the country, setting back President Trump's 31/2-year effort to expand oil and gas development in the United States. The reversals demonstrate both the enduring power of environmental laws that the Trump administration has been trying to weaken and the tenacity of environmental, tribal and community activists who have battled the projects on forested land and in federal courtrooms. In a surprise decision Monday, a federal judge ruled that the Dakota Access pipeline - which Trump approved within a month of taking office - must

A Review of Media Coverage of Climate Change and Global Warming in 2020

be shut down by Aug. 5, saying federal officials failed to carry out a complete analysis of its environmental impacts. The day before, two energy companies behind the controversial, 600mile Atlantic Coast Pipeline abandoned their six-year bid to build it, saying the \$8 billion project has become too expensive and faces an uncertain regulatory environment. And an April decision by a federal judge in Montana dealt a blow to the Keystone XL pipeline and raised questions about whether the U.S. Army Corps of Engineers will have to conduct more extensive environmental reviews for other projects". 134

Also in the realm of political and economic stories about climate change, attention was paid to continued investments in offshore wind energy as a low-cost and climate-friendly technological innovate proliferating. A new report from the High Level Panel for Sustainable Ocean Economic

Sustainable Ocean Economy¹³⁵ illustrated these trends. Among global coverage, journalist Jillian Ambrose from The Guardian reported, "Global offshore wind investment more than quadrupled in the first half of the year even as the coronavirus pandemic triggered an unprecedented economic shock. A report has found that investors gave the greenlight to 28 new offshore windfarms worth a total of \$35bn (£28bn) this year, four times more than in the first half of 2019 and well above the total for last year as a whole. The biggest halfyear tally for offshore wind investment more than made up for a slowdown in investment for onshore wind and solar farm projects after the outbreak of Covid-19, according to the report

"A number of recent legal defeats and business decisions have stymied three multibillion-dollar pipeline projects around the country, setting back President Trump's 3½-year effort to expand oil and gas development in the United States. The reversals demonstrate both the enduring power of environmental laws that the Trump administration has been trying to weaken and the tenacity of environmental, tribal and community activists who have battled the projects on forested land and in federal courtrooms." - The Washington Post



Police vehicles idle on the outskirts of the opposition camp fighting the Dakota Access oil pipeline near Cannon Ball, ND. Photo: Terray Sylvester/Reuters.

by Bloomberg NEF (BNEF)". ¹³⁶ Furthermore, *CNN* reporter Hazel Pfeifer noted, "Every dollar invested in a sustainable ocean economy can yield at least five times the return in benefits, according to a new report commissioned by the High Level Panel for a Sustainable Ocean Economy. As many countries roll out bailout packages to counter the impact of the Covid-19 pandemic, the report says investment in these four key ocean intervention areas could help aid economic recovery both now and in the future: Conservation and restoration of mangroves, decarbonization of the shipping industry, scaling up offshore wind production, and increasing sustainable protein from the ocean". ¹³⁷

136 https://www.theguardian.com/environment/2020/jul/13/offshore-wind-energy-investment-quadruples-despite-covid-19-slump 137 https://amp.cnn.com/cnn/2020/07/13/world/ocean-investment-world-resources-institute-cte/index.html

¹³⁴ https://www.washingtonpost.com/climateenvironment/2020/07/06/dakota-access-pipeline 135 https://www.oceanpanel.org/economicanalysis

A Review of Media Coverage of Climate Change and Global Warming in 2020

Especially in the US in July, numerous articles and editorials questioned US President Donald Trump's efforts to protect the environment and to combat climate change. For example, in a piece entitled 'Trump's continued disregard for the environment and climate change poses a mortal threat', the Editorial Board of The Los Angeles Times wrote, "It's fitting that President Trump invoked an interstate highway expansion in Atlanta last week to announce final rules that, if they survive the inevitable legal challenges, will undermine one of the nation's bedrock environmental laws, the National Environmental Policy Act. American voters face a fork in their own road this November - stay on the Trump expressway to environmental degradation and catastrophic climate change, or shift to the road, bumpy as it may be, to a cleaner environment and more sustainable future of wind, solar and other energy sources that do not involve burning fossil fuels. The COVID-19 pandemic understandably has seized the nation's attention, but that hasn't lessened the risk we all face from air and water pollution and carbon-fed global warming. Trump has unabashedly sought to dismantle federal regulatory structures to speed up construction projects while forging a national energy plan based on producing and burning fossil fuels. His embrace of the oil, gas and coal industries defies the global scientific consensus that burning fossil fuels emits greenhouse gases that make the Earth less habitable by warming the atmosphere, feeding stronger and more frequent storms, triggering devastating droughts that propel human migration, and pushing up sea levels so that they encroach on cities and other human settlements. In fact, the National Oceanic and Atmospheric Administration reported last week that unusually high tides led to record flooding among one-quarter of Atlantic and Gulf Coast communities where the agency maintains tide gauges. Climate change is no dystopian vision of the future; it is here. Trump's efforts to eviscerate regulatory oversight of the environment is rooted in his belief that regulations are for the most part unnecessary hurdles to economic progress. He bewails the amount of time it takes for projects to clear environmental reviews and related court challenges, adding what, in his

mind, are unnecessary costs and delays. To be honest, he may have something there. NEPA came into being five decades ago - signed into law by President Nixon – and it's not out of line to suspect that there are places where the law and the regulations that arose from it could use some reasonable revising. But Trump and his industry-connected advisors are not the ones to trust with such a task". 138

At the end of July - as the count went below 100 days before the next US Presidential election - stories of President Trump's time to a next popular vote as it related to a changing climate abounded. For instance, Guardian journalist Emily Holden wrote, "The world will be watching the US presidential election on Tuesday 3 November, but just 24 hours later is another hugely consequential news event when the US will formally leave the Paris climate agreement. The Trump administration set the withdrawal in motion with a letter to the UN, and, in a coincidence of timing, the US will exit the day after the election, joining Iran and Turkey as the only major countries not to participate in the agreement".139

Finally, in July *cultural* themes also wove through many climate change or global warming stories. To illustrate, an influential opinion piece by journalist Farhaad Manjoo on rethinking transport punctuated the cultural imaginary in The New York Times. 140

¹³⁸ https://www.latimes.com/opinion/ story/2020-07-19/trump-nepa-biden-sandersenvironment-climate-change 139 https://www.theguardian.com/us-news/2020/

jul/27/us-paris-climate-accord-exit-what-it-means

¹⁴⁰ https://www.nytimes.com/2020/07/09/opinion/ sunday/ban-cars-manhattan-cities.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

AUGUST "Rapid intensification events are more likely because of climate change"



Residents gathered at the Burton Complex, an event center in Lake Charles, Louisiana, for assistance with evacuation. Photo: William Widmer, *The New York Times*.

August 2020 saw media coverage of climate change remain at similar levels to July 2020 coverage across **120 sources** in **54 countries** in newspaper, radio and television accounts. However, coverage was **45% lower** than August 2019 continuing a downward trend that the MeCCO has documented beginning February 2020 when the global COVID-19 pandemic began to dominate public attention.

ugust 2020 saw media coverage of climate change or global warming remain at similar levels to July 2020 coverage across 120 sources in 54 countries in newspaper, radio and television accounts. However, coverage was 45% lower than August 2019 continuing a downward trend in media portrayals of climate change that the Media and Climate Change Observatory (MeCCO) has documented beginning February 2020 when the global COVID-19 pandemic began to dominate public attention.

Regionally, coverage is down in Oceania (-57%), Africa (-52%), Europe (-47%), Latin America (-47%), North America (-37%), Asia (-36%),

and the Middle East (-18%) from August 2019 levels of media attention to climate change or global warming. Yet coverage compared to the previous month of July is down less dramatically in Oceania (-1%), Africa (-6%), and Asia (-36%), while it remained steady in Europe and Latin America while increasing slightly in North America (+9%), and the Middle East (+4%). International wire services also increased slightly (+4%) from the previous month.

At the country level, of note several European countries have seen a drop in the amount of climate change media coverage from July to August 2020 with the fall most pronounced in Norway (-44%), as well as in Spain (-25%), Sweden

A Review of Media Coverage of Climate Change and Global Warming in 2020

Regionally, coverage was down from August 2019:

- Oceania (-57%)
- Africa (-52%)
- Europe (-47%)
- Latin America (-47%)
- North America (-37%)
- Asia (-36%)
- Middle East (-18%)

Coverage compared to the previous month of July:

- Oceania (-1%)
- Africa (-6%)
- Europe (0%)
- Latin America (0%)
- North America (+9%)
- Asia (-36%)

- Middle East (+4)
- Int Wire Services (+4)

At the country level from July to August 2020:

- Norway (-44%)
- Spain (-25%)
- Sweden (-15%)
- Germany (-9%)
- UK (+10%)
- Russia (+10%)
- Australia (+12)
- India (+13%)

- Denmark (+18%)
- Canada (+26%)
- USA (-4%)
- US TV (+62%)

(-15%), and Germany (-9%). Yet coverage was up in the United Kingdom (UK) (+10%), Russia (+10%), Australia (+12%), India (+13%), Denmark (+18%) and Canada (+26%). Coverage in the United States (US) wobbled as US newspaper coverage dropped a further 4% in August while US television coverage rose 62%.

Moving to the content of coverage, in August ecological and meteorological themes - particularly addressing hurricanes and wildfires - drove a considerable amount of media coverage of climate change or global warming. To begin, hurricane activity in the Atlantic and Caribbean Basin attracted many media stories that made links between their intensity and a changing climate. In early August, accounts of hurricane Isaias making landfall on the United States Carolina coast prompted connections between hurricanes and climate change.

For example, journalist Jeff Berardelli from *CBS News* reported, "The 2020 Atlantic hurricane season is racking up storms at breakneck speed. To date, the season is about two weeks ahead of record pace and it's only one third of the way through. On Wednesday, the news became more concerning as the research team at Colorado State University (CSU) – the standard bearer for seasonal forecasts – released the most dire forecast in their 37-year history. Labeling the 2020

hurricane season "extremely active," the team is now predicting 24 named storms, including 12 total hurricanes and 5 major hurricanes — each figure about double that of a normal season... The most obvious contributing factor for such an active season is water temperatures being near historic levels in the Tropical Atlantic, which can act like high-octane fuel to power hurricanes... The hotter-than-normal water is driven by the warm phase of a natural cycle called the Atlantic Multidecadal Oscillation (AMO) and boosted by human-caused climate change. Human warming has increased Tropical Atlantic sea surface temperatures by about two degrees Fahrenheit since 1901". 141

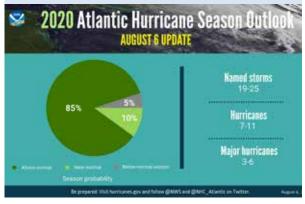
To further illustrate, Associated Press journalist Seth Borenstein wrote, "Already smashing records, this year's hyperactive Atlantic hurricane season is about to get even nastier, forecasters predict. In the coming months, they expect to run out of traditional hurricane names and see about twice as much storm activity as a normal year. The National Oceanic and Atmospheric Administration on Thursday upped its seasonal forecast, now predicting a far-above-average 19 to 25 named storms – seven to 11 of them to become hurricanes and three to six of those to become major hurricanes with winds of at least 111 mph (178 kph). That's a few more 141 https://www.cbsnews.com/news/hurricaneseason-2020-forecast-extremely-active-24-named-

A Review of Media Coverage of Climate Change and Global Warming in 2020

storms than the agency's May forecast. The agency increased the chance of an above average hurricane season from 60% to 85%... Sea surface temperatures in the eastern Atlantic are nearly 2 degrees (1 degree Celsius) warmer than normal. That not only provides more fuel for storms but changes air pressure and winds to make favorable conditions for storms to form and strengthen, he said. Emanuel of MIT pointed to an extra quiet Pacific storm season as another indicator for an active Atlantic. When the Pacific is quiet, the Atlantic tends to be much busier as they tend to balance out. Also, water temperatures near the equator in the Pacific are cooling, with a brewing La Nina, which is the flip side of El Nino. Research shows there are usually more Atlantic storms during a La Nina. Even though studies predict that a warmer world means generally stronger and wetter hurricanes, NOAA's Bell and Emanuel said there are so many complicated factors in an individual season they can't say either way whether man-made climate change is a factor in active years like 2020". 142

Meanwhile, journalist Andrew Freedman from TheWashington Post reported, "Driving the forecast is a series of factors that point to an unusually active season. These include widespread above-average sea surface temperatures in the tropical Atlantic Ocean, particularly in the main development region between West Africa and the Leeward Islands. In addition, there are above-average temperatures in the Caribbean Sea, and sea surface temperatures are also running well above average off the East Coast and in the Gulf of Mexico. The warm waters are the result, in part, of long-term, human-caused climate change, as well as natural climate cycles...Studies have shown that while warming sea and air temperatures are not leading to greater numbers of tropical cyclones, they are influencing their intensity in a detectable way". 143

As a final example, New York Times reporter Henry Fountain shared comments from Dr. Gerry In August **ecological** and **meteorological** themes – particularly addressing hurricanes and wildfires – drove a considerable amount of media coverage of climate change or global warming.



Updated 2020 Atlantic hurricane season probability and numbers of named storms. Source: NOAA.

Bell from the National Oceanic and Atmospheric Administration, writing that Dr. Bell "said that it was too early to tell whether climate change was contributing to the activity this season. Hurricane activity in the Atlantic is greatly affected by two elements of the planet's climate system natural variations, over decades, in sea surface temperatures in the North Atlantic, and shorterterm temperature variations in the equatorial Pacific Ocean. The North Atlantic variability has led to increased overall hurricane activity since 1995. This year conditions in the equatorial Pacific - cooling sea-surface temperatures as the climate pattern known as La Niña starts to emerge - may be helping to increase activity as well by affecting wind patterns in the tropical Atlantic and Caribbean. But Dr. Bell said that whatever the contribution of climate change to this season's activity, global warming affects the impacts of storms. Rising sea levels increase the danger of storm surges, he said, and warmer air temperatures generally make storms bring more rainfall".144

As coverage in the month of August continued, media attention to post-tropical storm Marco and tropical storm Laura coming on land in the US

144 https://www.nytimes.com/2020/08/06/climate/hurricanes-noaa-prediction.html

¹⁴² https://apnews.com/096feae21598609695482a 2eaf3a3e2b

¹⁴³ https://www.washingtonpost.com/ weather/2020/08/06/hurricane-outlook-extremelyactive

A Review of Media Coverage of Climate Change and Global Warming in 2020

Gulf Coast region was pervasive. For instance, Washington Post journalists Matthew Cappucci and Andrew Freedman reported, "If Tropical Storm Laura does undergo rapid intensification, says Jim Kossin, a researcher at NOAA and the University of Wisconsin, "It's very likely that climate change is playing some role in that." He said the unusually warm waters of the gulf are tied in part to human-caused global warming, since the vast majority of the heat trapped in the atmosphere by greenhouse-gas emissions ends up in the oceans. High water temperatures are a prerequisite for rapid intensification events, and right now, virtually the entire tropical Atlantic Ocean Basin is seeing unusually mild conditions. "Rapid intensification events are more likely because of climate change," he said in an interview". 145

Covering hurricane Laura in late August, Associated Press journalist Seth Borenstein reported, "A destructive storm is rising from warm waters. Again. America and the world are getting more frequent and bigger multibillion dollar tropical catastrophes like Hurricane Laura, which is menacing the U.S. Gulf Coast, because of a combination of increased coastal development, natural climate cycles, reductions in air pollution and man-made climate change, experts say". 146

Furthermore, *CNBC* reporter Emma Newburger noted that "rising ocean temperatures driven by climate change are leading to more intense and destructive hurricanes. As hurricanes such as Laura strengthen more rapidly in warmer waters, states have less time to prepare storm mitigation and evacuate people from dangerous areas".¹⁴⁷ Also, *Washington Post* journalists Chris Mooney and Andrew Freedman reported that hurricane Laura "had rocketed into a high-end Category 4 storm, with wind speeds of nearly 145 mph, and was teetering toward Category 5 – the most dangerous.Itwasoneofthefastesttransformations on record in the Gulf of Mexico. Experts call the

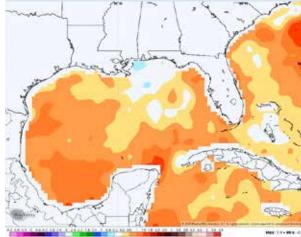
145 https://www.washingtonpost.com/weather/2020/08/24/laura-hurricane-intensification

146 https://apnews.com/84ddef64a42db194faeeccc0cba7ff0e

147 https://www.cnbc.com/2020/08/26/hurricane-laura-forecast-category-4-poses-catastrophic-threat-to-louisiana-and-texas.html

"High water temperatures are a prerequisite for rapid intensification events, and right now, virtually the entire tropical Atlantic Ocean Basin is seeing unusually mild conditions. "Rapid intensification events are more likely because of climate change."

- Jim Kossin, The Washington Post



Gulf of Mexico sea surface temperature anomalies in degrees Celsius. Virtually the entire Gulf is above average or well above average in terms of temperature. Source: Tropical Tidbits.

phenomenon "rapid intensification" and say it's happening more frequently, thanks in part to warming ocean temperatures driven by climate change. The speed with which these storms morph can complicate both weather forecasting and emergency responses... Research shows that rapid intensification events are getting more common in the Atlantic hurricane region as the climate warms. In fact, some experts say, it is almost as if as the maximum "speed limit" for storms increases, the storms themselves, like drivers, are adjusting by speeding up".148 Meanwhile, US National Public Radio journalist Rebecca Hersher noted, "Hurricane Laura's top wind speeds nearly doubled in just 24 hours as it approached the border between Texas and Louisiana. The wall of water it pushed in front

148 https://www.washingtonpost.com/climate-environment/2020/08/27/hurricane-laura-rapid-intensification

A Review of Media Coverage of Climate Change and Global Warming in 2020

of it grew until forecasters warned that it would produce "unsurvivable" storm surge. Laura's rapid intensification is one hallmark of climate change. As the Earth warms up, the water on the surface of the ocean gets hotter. Hot water is like a battery charger for hurricanes; it send energy and moisture into the storm as it forms and helps it grow more powerful and deadly".¹⁴⁹

Not only did hurricane activity drive ecological and meteorological coverage in the US in August, news of wildfires and links to climate change also generated many media accounts. For example, wildfires first sparked by lightning strikes drove media attention. For example, journalist Nathan Rott from US *National Public Radio* reported, "California is facing a searing heat wave and a growing number of wildfires – challenges only projected to get worse with climate change".¹⁵⁰

In August, there were also many media stories about *scientific* research and findings about aspects of climate change or global warming. Early in the month, new research in Nature regarding global warming and releases of significant carbon dioxide from tropical soils generated media attention. For example, New York Times journalist Gabriel Popkin reported, "Humble dirt could pack an unexpected climate punch, according to a new study published Wednesday in the journal Nature. An experiment that heated soil underneath a tropical rainforest to mimic temperatures expected in the coming decades found that hotter soils released 55 percent more planet-warming carbon dioxide than did nearby unwarmed areas. If the results apply throughout the tropics, much of the carbon stored underground could be released as the planet heats up".151

In mid-August, new research from *Nature Communications Earth and Environment* about Greenland ice sheet melt from a warming climate garnered significant media reports . For example,

149 https://www.npr.org/sections/hurricane-lauralive-updates/2020/08/27/906633395/hurricaneslike-laura-are-more-likely-because-of-climate-change

150 https://www.npr.org/2020/08/19/903982598/climate-change-may-lead-to-more-record-heat-and-fires-in-california-experts-warn

151 https://www.nytimes.com/2020/08/12/climate/tropical-soils-climate-change.html

New research in *Nature* regarding global warming and releases of significant carbon dioxide from tropical soils generated media attention: "An experiment that heated soil underneath a tropical rainforest to mimic temperatures expected in the coming decades found that hotter soils released 55 percent more planet-warming carbon dioxide than did nearby unwarmed areas".

- Gabriel Popkin, The New York Times



Andrew Nottingham, left, with fellow researchers on Barro Colorado Island in Panama, carrying a heating structure for their experiment. Photo: Geetha Iyer.

CNN journalists Max Claypool and Brandon Miller reported, "Greenland's ice sheet has melted to a point of no return, and efforts to slow global warming will not stop it from disintegrating. That's according to a new study by researchers at Ohio State University...Greenland's ice sheet dumps more than 280 billion metric tons of melting ice into the ocean each year, making it the greatest single contributor to global sea level rise, according to Michalea King, the lead author of the study and researcher at Ohio State University. The ice loss has been so massive in recent years, she said, that it has caused a measurable change in the gravitational field over Greenland... Ice melting in Greenland contributes more than a millimeter rise to sea level every year, and that's likely to get worse. Sea levels are projected to rise by more than 3 feet by the end of the century, wiping away beaches and coastal properties. Coastal states like Florida, and low-lying island nations are particularly vulnerable. Just 3 feet of sea level rise could put large areas of coastline underwater. Forty percent

A Review of Media Coverage of Climate Change and Global Warming in 2020

of the US population resides in coastal areas that are vulnerable to sea level rise". 152

As another example, *BBC* journalist Matt McGrath wrote, "Scientists say the loss of ice in Greenland lurched forward again last year, breaking the previous record by 15%. A new analysis says that the scale of the melt was "unprecedented" in records dating back to 1948. High pressure systems that became blocked over Greenland last Summer were the immediate cause of the huge losses. But the authors say ongoing emissions of carbon are pushing Greenland into an era of more extreme melting". Journalist Robin McKie from *The Guardian* wrote, ""the level of ice loss is 'staggering'..." analysis indicates that sea level rises, triggered by melting glaciers and ice sheets, could reach a meter by end of the century". Journalist Robin McKie

Political and economic media coverage of climate change or global warming was evident in August as well. For example, stories of pipeline pressures and conflicts in North America relating to climate change pressures - shaped media narratives. To illustrate, journalist Sarah McFarlane from the Wall Street Journal wrote, "BP PLC cut its dividend for the first time in a decade and outlined plans to pivot away from oil and gas and invest more in low carbon energy-marking one of the most dramatic energy-transition plans among its oil major peers at a time of deep crisis for the industry. The British energy giant aims to increase its low-carbon investments to \$5 billion a year by 2030, from around \$500 million, at the same time as seeing its oil and gas production fall by 40% from 2019 levels". 155

Meanwhile, Associated Press reporter Danica Kirka noted, "BP plc said Tuesday it plans to slash dividends as the global oil company prepares for declining sales of fossil fuels by boosting investment in alternative energy projects.

152 https://www.cnn.com/2020/08/14/weather/greenland-ice-sheet/index.html 153 https://www.bbc.com/news/science-environment-53849695

154 https://www.theguardian.com/ environment/2020/aug/23/earth-lost-28-trilliontonnes-ice-30-years-global-warming 155 https://www.wsj.com/articles/bp-slashesdividend-11596522123 New research from Nature Communications Earth and Environment about Greenland ice sheet melt from a warming climate garnered significant media reports.



Dogs hauled a sled through meltwater on coastal sea ice in northwest Greenland in 2019. Photo: Steffen Olsen, Danmarks Meteorologiske Institut.

London-based BP said it will increase spending on low-carbon technology, including renewable energy projects, 10-fold to \$5 billion a year over the next decade. The company expects oil and gas production to drop by about 40% over the same period. To help finance the strategic shift, BP said it will cut dividends to 5.25 cents a share from 10.5 cents in the first quarter. That will help the company meet its previously announced goal of achieving net zero carbon emissions by 2050 or sooner. BP announced the shift as it reported a second-quarter operating loss of \$6.68 billion as the COVID-19 pandemic cuts oil prices and demand for energy. The figure, which excludes one-time items and changes in the value of inventories, compares to an operating profit of \$2.81 billion in the same period last year". 156

Also in the US, media coverage of the Democratic and Republican National Conventions as well as the candidates and their stances on climate change generated media attention in August (see Figure 9). For example, coverage of 'Trump' and 'climate change' was abundant in both August 2020 and the previous August 2019 but 'Biden', 'democratic', 'presidential', and 'change' emerged as terms invoked in climate change stories in August 2020.

156 https://apnews.com/3c9c6f78d93aaca7003dade079d5bbc6

A Review of Media Coverage of Climate Change and Global Warming in 2020

In the US, media coverage of the Democratic and Republican National Conventions as well as the candidates and their stances on climate change generated media attention in August. For example, coverage of 'Trump' and 'climate change' was abundant in both August 2020 and the previous August 2019 but 'Biden', 'democratic', 'presidential', and 'change' emerged as terms invoked in climate change stories in August 2020.

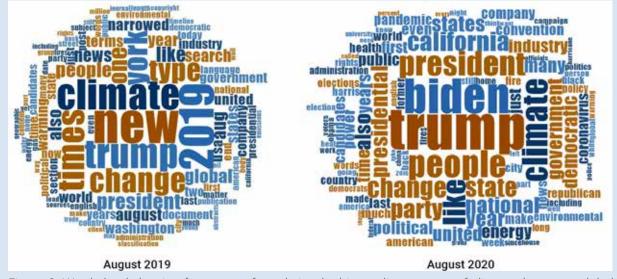


Figure 9. Word cloud showing frequency of words invoked in media coverage of climate change or global warming in United States newspaper sources in August 2019 (left) and August 2020 (right) - from *The Los Angeles Times, New York Times, USA Today, Wall Street Journal* and *Washington Post*.

Finally, cultural themes continued to weave through many climate change or global warming stories in August. Several of these cultural stories also threaded through ecological and meteorological accounts described earlier. For example, in an early August New York Times article journalists Christopher Flavelle and Henry Fountain wrote, "A low-grade hurricane that is slowly scraping along the East Coast. A wildfire in California that has led to evacuation orders for 8,000 people. And in both places, as well as everywhere between, a pandemic that keeps worsening. The daily morning briefing from the Federal Emergency Management Agency, usually a dry document full of acronyms and statistics, has begun to resemble the setup for a disaster movie. But rather than a freak occurrence, experts say that the pair of hazards bracketing the country this week offers a preview of life under climate change: a relentless grind of overlapping disasters, major or minor. The coronavirus pandemic has further exposed flaws in the nation's defenses, including weak construction standards in vulnerable areas, underfunded government agencies, and racial and income disparities that put some communities at greater risk. Experts argue that the country must fundamentally rethink how it prepares for similar disasters as the effects of global warming accelerate".¹⁵⁷

Ongoing media attention to Greta Thunberg and the Fridays for Future School Strikes for climate action campaign continued in August as well. For example, *Agence-France Presse* and *The Guardian* reported, "Swedish environmental activist Greta Thunberg has returned to school after a year off campaigning to curb climate change... Thunberg did not say in which city or school she would be continuing her studies. Since her last school year finished in June 2019, the teenager's travels around the world meant that she ended up doing lessons remotely. Rather than head into the final years of secondary school, she travelled across the Atlantic by sailing boat – hoping to highlight the carbon emissions of flying". 158

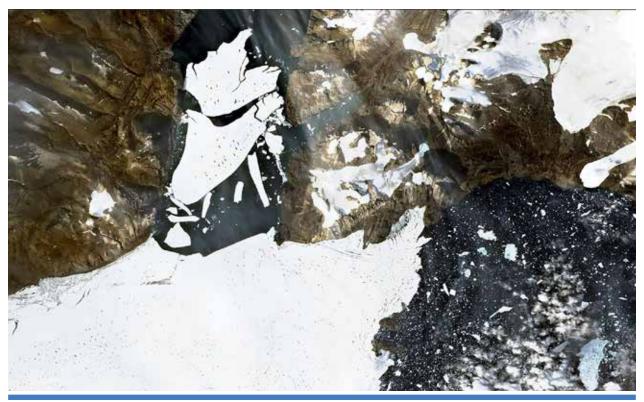
157 https://www.nytimes.com/2020/08/04/climate/hurricane-isaias-apple-fire-climate.html

158 https://www.theguardian.com/environment/2020/aug/25/greta-thunberg-returns-to-school-after-year-off

A Review of Media Coverage of Climate Change and Global Warming in 2020

SEPTEMBER

"Nioghalvfjerdsfjorden"



A satellite image captured on Aug 27, 2020 shows ice breaking off the Nioghalvfjerdsfjorden glacier in Northeast Greenland. Photo: European Space Agency/AFP.

September 2020 saw print media coverage of climate change increase, up 46% from the previous month of August 2020. Political, economic, ecological, meteorological, cultural and scientific stories all contributed to this September rebound from many months of low levels of coverage since the coronavirus pandemic struck. That said, September 2020 coverage was still down 37% from the levels of coverage a year earlier.

eptember 2020 saw print media coverage of climate change or global warming increase, up 46% from the previous month of August 2020. Political, economic, ecological, meteorological, cultural and scientific stories all contributed to this September rebound from many months of low levels of coverage since the coronavirus pandemic struck. That said, September 2020 coverage was still down 37% from the levels of coverage a year earlier (September 2019). Globally radio segments about climate change or global warming increased 90% from August 2020 but were still at levels 41% lower than in September

2019. Yet wire services - The Associated Press, Agence France Presse, The Canadian Press and United Press International - carried stories about climate change or global warming 84% more frequently in September 2020 than the previous month, and also 37% more frequently than in September 2019.

Regionally, coverage was up everywhere from the previous month of August 2020, but down everywhere compared to a year ago (September 2019). Asian coverage was up 13% from a month ago yet still down 44% from last September. North American coverage rose sharply (84%) from August 2020 yet still was down slightly

A Review of Media Coverage of Climate Change and Global Warming in 2020

(1%) from September 2019. Coverage in Oceania increased 20% from last month yet was still down 57% from September 2019. African coverage went up 57% from a month ago but still remained at levels 37% lower than last September. European Union coverage increased 45% from August 2020 but still remained at 41% lower levels than September 2019. Latin American coverage increased 63% from a month ago yet still remained 34% lower than last September. And levels of coverage in the Middle East skyrocketed to levels 180% higher than August 2020, but these levels were nonetheless still down 44% from September 2020.

At the country level, all national media attention to climate change or global warming followed similar trends with just a few exceptions: Canadian coverage increased 30% in September 2020 from a year ago, while Danish coverage dipped 9% from last month and Indian coverage similarly dropped 19% from August 2020. Otherwise, notable increases in September 2020 coverage from a month ago were

detected in the United States (US) television networks - up 172% - and newspapers - up 71%. Moreover, coverage in Canada as well as in Norway more than doubled in September 2020 compared to coverage in August 2020, while coverage in Germany and Sweden nearly doubled from a previous month.

Moving to the content of coverage, in September *ecological* and *meteorological* themes connected to a changing climate continued to unfold all around the world in September. For example, New York Times journalist Veronica Penney reported on fires in Argentina, Indonesia, The Arctic and Siberia, Australia and Brazil. She wrote, "Extreme temperatures and more severe droughts, the result of human-caused climate change, have created a world that's ready to burn"¹⁵⁹.

159 https://www.nytimes.com/2020/09/16/climate/wildfires-globally.html

Flash floods caused by extreme rains across Africa were connected to changing climate conditions. As warmer air holds more water, in September this led to heavier and more intense rainfall events. "As forest fires turn California's sky an apocalyptic red, vast swathes of Africa are being submerged by once in a lifetime floods. From Ethiopia and Sudan to Nigeria and Senegal, torrential rains have displaced well over a million people and are threatening already vulnerable food supplies." - The Telegraph



Children play in flood water in Sudan's Omdurman city. Photo: Anadolu Agency.

Flash floods caused by extreme rains across West, Central and East Africa in September were also connected to changing climate conditions. As warmer air holds more water, in September this led to heavier and more intense rainfall events in places like Nigeria, Chad, Niger and Cameroon. For example, Africa correspondent Will Brown from The Telegraph reported, "As forest fires turn California's sky an apocalyptic red, vast swathes of Africa are being submerged by once in a lifetime floods. From Ethiopia and Sudan to Nigeria and Senegal, torrential rains have displaced well over a million people and are threatening already vulnerable food supplies. In Ethiopia, over 500,000 people have been affected after several rivers, including the Blue Nile, broke their banks. Some places recorded the heaviest rains in a century, according to Seleshi Bekele, Ethiopia's Water and Irrigation Minister. Officials say the floods have killed animals and destroyed

A Review of Media Coverage of Climate Change and Global Warming in 2020

in a way not seen in decades. About 200,000 people have left been homeless in at least five of Ethiopia's 10 regions, said Mr Bekele. Downriver the devastation in Sudan is immense. Earlier this month, the rains destroyed around 100,000 homes, killing more of the breadbaskets



people. Figure 10. The front page Nile coverage of the massive block regularly bursts its of ice - one sixth the size of Singapore - breaking off the Sudan, Nioghalvfjerdsfjorden glacier irrigating the area in Northeast Greenland in and making parts of The Straits Times (Singapore) the vast nation one on September 16, 2020.

of Africa. But this year the Nile has reached such an 'unprecedented level' that the water is threatening the country's 200 ancient pyramids". 160

From Africa to the Arctic, news media around the world covered the discovery of a large block of ice breaking off the Nioghalvfjerdsfjorden glacier in Northeast Greenland. For example, an Agence France Presse article ran on the front page of The Straits Times in Singapore, noting "A massive chunk of ice - larger than the city of Paris - has broken off from the Arctic's largest ice shelf because of warmer temperatures in Greenland, scientists said... The 113-square-kilometre block, about one-sixth the size of Singapore, broke off the Nioghalvfjerdsfjorden glacier in Northeast Greenland, which the scientists said had been expected given the rising average temperatures... While it is normal for pieces of ice to break off from a glacier - a process called calving - they are generally not this large". 161This 160 https://www.telegraph.co.uk/global-health/ climate-and-people/once-in-a-lifetime-floods-wreakhavoc-across-africa

161 https://www.straitstimes.com/world/europe/ massive-chunk-of-greenlands-largest-glacier-crashes-

September ecological In and meteorological themes connected to a changing climate continued to unfold all around the world in September. "Extreme temperatures and more severe droughts, the result of human-caused climate change, have created a world that's ready to burn". - The New York Times



A volunteer firefighter at work in the Pantanal region of southern Brazil last month. Photo: Maria Magdalena Arrellaga, The New York Times.

Straits Times article ran as a front-page story in their September 16 print edition (see Figure 10).

Meanwhile - wrapping these regional ecological and meteorological event together in an article entitled 'Wild weather this year shows growing impact of climate change, scientists say' - The Canadian Broadcasting Corporation reported, "The planet is showing signs it's in peril. In recent weeks, the world has seen ferocious wildfires in the U.S. West, torrential rains in Africa, weirdly warm temperatures on the surface of tropical oceans, and record heat waves from California to the Siberian Arctic. This spate of wild weather is consistent with climate change, scientists say, and the world can expect even more extreme weather and higher risks from natural disasters as global emissions of greenhouse gases continue...For decades, scientists have warned of such events - but have been wary of saying that a particular storm or heat wave was a direct result of climate change. That's now changing. Advances in a relatively new field known as "event

A Review of Media Coverage of Climate Change and Global Warming in 2020

attribution science" have enabled researchers to assess how big a role climate change might have played in a specific case. In determining that link, scientists assess simulations of how weather systems might behave if humans had never started pumping carbon dioxide into the air, and compare that with what is happening today. They also factor in weather observations made over the last century or more". 162

In North America, ongoing media coverage of hurricanes in the Caribbean basin garnered significant media attention. For example, Associated Press reporters Stacey Plaisance and Janet McConnaughey noted, "The extraordinarily busy hurricane season - like the catastrophic wildfire season on the West Coast - has focused attention on the role of climate change. Scientists say global warming is making the strongest of hurricanes, those with wind speeds of 110 mph or more, even stronger. Also, warmer air holds more moisture, making storms rainier, and rising seas from global warming make storm surges higher and more damaging. In addition, scientists have been seeing tropical storms and hurricanes slow down once they hit the United States by about 17% since 1900, and that gives them the opportunity to unload more rain over one place, as 2017's Hurricane Harvey did in Houston". 163

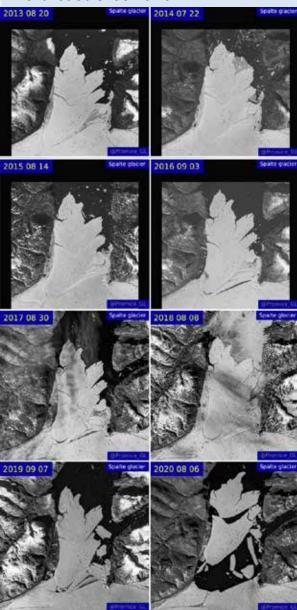
Hurricanes that ran through the English alphabet and into the Greek alphabet prompted media accounts that connected these events to a changing climate. For example, *CNN* journalists Jason Hanna and Hollie Silverman reported, "A Category 1 Hurricane Sally is pummeling southern Alabama and the Florida Panhandle after it crossed land Wednesday morning, prompting water rescues, sapping power, dropping trees and threatening catastrophic flooding as it crawls at an agonizingly slow pace". 164 Meanwhile, *Associated Press* journalists Jay Reeves, Angie Wang and Jeff Martin noted,

162 https://www.cbc.ca/news/technology/extreme-weather-climate-change-1.5718546

163 https://apnews.com/4ea2a4cd36cceefad876d9e878cb5bc3

164 https://www.cnn.com/2020/09/16/weather/hurricane-sally-wednesday/index.html

News media around the world covered the discovery of a large block of ice breaking off the Nioghalvfjerdsfjorden glacier in Northeast Greenland.



Satellite images of the Spalte glacier disintegration between 2013 and 2020. Photo: *Reuters*.

"Like the wildfires raging on the West Coast, the onslaught of hurricanes has focused attention on climate change, which scientists say is causing slower, rainier, more powerful and more destructive storms". 165

165 https://apnews.com/8427b1f1bb05f47ed74f75

A Review of Media Coverage of Climate Change and Global Warming in 2020

And as The Associated Press article mentioned, not just hurricane activity garnered media attention in September, but also wildfires across the western US generated media connections with climate change and global warming. For instance, a Los Angeles Times Editorial commented, "After an extended weekend of wildfires, part of an early fire season that has already seen a record 2 million acres burned and Death Valley-like temperatures smothering the San Fernando Valley, Californians would be right to wonder whether we are living in a hellscape. We are not, it's safe to say. But we are living in the future that climate scientists have been trying to warn us about for years now. No, climate change did not start the El Dorado fire Saturday near Yucaipa. That, authorities report, was caused by celebrants setting off some pyrotechnics during a gender-reveal party. (What the hell were they thinking?) And climate change did not spark the Bobcat fire the next day in the San Gabriel Mountains north of Monrovia. But climate change has played a role in the conditions - in particular, the drier, hotter air and deeper droughts creating more flammable ecosystems - that are making these fires bigger and more dangerous. The fires here are part of a broad burning of wildlands in the West, which occurred naturally before densifying human settlements and the nonnative plants they introduced began changing the balance of nature. The Insurance Information Institute counted almost 40,000 wildfires in the country this year through Aug. 31, compared with fewer than 33,600 for the same time frame in 2019...This is the kind of change that climate experts told us to expect. But there is more going on than the smoke in our skies".166

These stories of wildfires then spilled into *political* and *economic* media coverage of climate change or global warming in September. For example, as US President Donald J. Trump traveled to California to inspect the fire damage and espouse outlier perspectives regarding wildfire activity and a changing climate, his US Democratic challenger Joe Biden attacked the President for his inaction

166 https://www.latimes.com/opinion/ story/2020-09-09/wildfires-record-temperatureshellscape-climate-change-greenland-rising-seas "The planet is showing signs it's in peril. This spate of wild weather is consistent with climate change, scientists say, and the world can expect even more extreme weather and higher risks from natural disasters as global emissions of greenhouse gases continue."

- The Canadian Broadcasting Corporation



The Kwanyin temple built on a rocky island in the middle of the Yangtze River is seen flooded along Ezhou in central China's Hubei province. The temple first built in 1345AD has survived numerous floods and been rebuilt over the centuries. Photo: Chinatopix, *AP*.

as well as misinformation about climate change. For example, journalists Seung Min Kim and Brady Dennis from The Washington Post noted, "Democratic presidential nominee Joe Biden excoriated President Trump on Monday over his environmental record as wildfires continued to burn through much of the West and as the president used a trip to California to question the scientific consensus that climate change is a leading cause of the devastating blazes". 167 As another example, PBS Newshour journalist Lisa Desjardins reported, "The wildfire disaster in the American West is highlighting a major political difference between President Trump and Joe Biden: their perspectives on climate change. While scientists increasingly warn that climate change is driving extreme weather events like the western fires -- a view Biden adopts --

167 https://www.washingtonpost.com/politics/devastating-wildfires-out-west-inject-climate-change-into-the-presidential-campaign/2020/09/14/5418cd62-f694-11ea-be57-d00bb9bc632d_story.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

Trump blames the phenomenon on poor forest management". Figure 11 shows the front pages of *USA Today*, *Los Angeles Times* and *The New York Times* in mid-September documenting these intersections of ecological and political themes of climate change.



Figure 11. Front page coverage *USA Today, The New York Times*, and *The Los Angeles Times* in mid-September documenting these intersections of ecological and political themes of climate change.

As another illustration, in an article titled 'Underwater and on fire: US climate change magnifies extremes', Associated Press journalist Seth Borenstein noted, "America's worsening climate change problem is as polarized as its politics. Some parts of the country have been burning this month while others were underwater in extreme weather disasters. The already parched West is getting drier and suffering deadly wildfires because of it, while the much wetter East keeps getting drenched in mega-rainfall events, some hurricane related and others not. Climate change is magnifying both extremes, but it may not be the only factor, several scientists told The Associated Press". 169

Further into political and economic themes in September media coverage of climate change or global warming, media portrayed actions from the US Trump administration regarding the climate implications of various environmental rollbacks. For example, *New York Times* journalists Nadja Popovich and Brad Plumer wrote, "President Trump has made dismantling federal climate policies a

168 https://www.pbs.org/newshour/show/western-wildfires-highlight-divergent-stances-of-trump-biden-on-climate-change

169 https://apnews.com/ d7d327453d725d4eed328063c78a03a1 "After an extended weekend of wildfires, part of an early fire season that has already seen a record **2 million acres burned** and Death Valley-like temperatures smothering the San Fernando Valley, Californians would be right to wonder whether we are living in a hellscape. We are not, it's safe to say. But we are living in the future that climate scientists have been trying to warn us about for years now."

- The Los Angeles Times



Fires light up a hillside behind the Bidwell Bar Bridge in Oroville, California. Photo: Noah Berger, AP.

centerpiece of his administration. A new analysis from the Rhodium Group¹⁷⁰ finds those rollbacks add up to a lot more planet-warming emissions... Together, these rollbacks are expected to result in an additional 1.8 billion metric tons of greenhouse gases in the atmosphere by 2035...The Trump administration has acted to repeal or weaken at least 100 environmental regulations over the past four years, including a number of Obamaera climate policies that Mr. Trump has said stifle businesses".¹⁷¹

Also in September, General Electric announced that it will no longer build coal-fired power plants, in a shift to a focus on renewable energy in the context of a changing climate. *BBC* 170 https://rhg.com/research/the-rollback-of-us-climate-policy

171 https://www.nytimes.com/interactive/2020/09/17/climate/emissions-trumprollbacks-deregulation.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

reported, "In a dramatic reversal, one of the world's biggest makers of coalfired power plants is to exit the market and focus on greener alternatives. US industrial giant General Electric said it would shut or sell sites as it prioritised its renewable energy and power generation businesses. It comes ahead of a US Presidential election in which the candidates hold starkly different views on coal...GE has said in the past it would focus less on fossil fuels, reflecting the growing acceptance of cleaner energy sources in US power grids".172 Meanwhile, journalist Matt Egan at CNN noted, "Struggling GE (GE) announced Monday it won't build new coal-fueled power plants, making it the latest major company to dump coal in an exit that may include asset sales, site closures and layoffs. The move marks a dramatic reversal for GE. Just five years ago, the company doubled down on coal by acquiring Alstom's power business, which makes coalfueled turbines. That \$9.5 billion deal --GE's biggest-ever industrial purchase -proved to be a disaster. Coal has been crushed by the rise of natural gas and a shift toward solar, wind and renewable energy. Since then, GE has laid off thousands of power workers, slashed its dividend to a penny, fired two CEOs

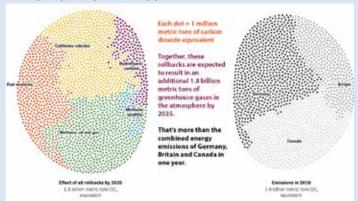
and sharply written down the value of its power business". 173

And at the United Nations General Assembly in late September - held virtually due to the ongoing coronavirus pandemic - in contrast with US Trump administration actions, many news outlets covered the pronouncements from Chinese President Xi Jinping to aim to have CO₂ emissions peak before 2030 and to achieve carbon neutrality before 2060. For example, New York Times journalist Somini Sengupta reported, "President Xi Jinping of China pledged on Tuesday that his country would adopt much 172 https://www.bbc.com/news/business-54242055 173 https://www.cnn.com/2020/09/21/business/ge-

173 https://www.cnn.com/2020/09/21/business/ge-coal-power/index.html

"President Trump has made dismantling federal climate policies a centerpiece of his administration. A new analysis from the Rhodium Group finds those rollbacks add up to a lot more planet-warming emissions... Together, these rollbacks are expected to result in an **additional 1.8 billion metric tons of greenhouse gases** in the atmosphere by 2035... The Trump administration has acted to repeal or weaken at least 100 environmental regulations over the past four years, including a number of Obama-era climate policies that Mr. Trump has said stifle businesses".

- The New York Times



Sources: The New York Times and The Rhodium Group; country comparisons via the International Energy Agency.

stronger climate targets and achieve what he called "carbon neutrality before 2060." If realized, the pledges would be crucial in the global fight against climate change. The announcement, made at the annual meeting of the United Nations General Assembly, is significant because China is currently the top producer of greenhouse gas emissions. What the country does to curb its emissions, therefore, is crucial to slowing down global warming on the whole".¹⁷⁴

Furthermore, the virtual United Nations General Assembly and virtual Climate Week NYC generated additional media attention. For instance, *Washington Post* correspondents

174 https://www.nytimes.com/2020/09/22/climate/china-emissions.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

Stephen Mufson and Brady Dennis reported, "Fall in New York typically means environmental groups, international corporations, government leaders and U.N. officials flocking to the Big Apple for Climate Week. Last year, they promised more meaningful action to tackle climate change - and hundreds of thousands of young people took to the streets to demand it. This year's event looks starkly different. The coronavirus pandemic, the reeling economy and the looming U.S. election have commandeered the nation's attention and forced Climate Week, like so much else in modern life, to migrate online. Yet some of the world's biggest companies say they have not lost sight of the urgency of climate change and have announced new plans to combat it. Morgan Stanley, AT&T and Walmart made fresh commitments and adopted more aggressive timetables for reducing greenhouse gas emissions. At the same time, General Electric announced that it will no longer build new coal-fired power plants". 175

In September, there were also many media stories about scientific research and findings about aspects of climate change or global warming. Early in the month, a new report from the Institute for Economics and Peace¹⁷⁶ generated media attention. For example, journalist Jon Henley from The Guardian wrote, "More than 1 billion people face being displaced within 30 years as the climate crisis and rapid population growth drive an increase in migration with "huge impacts" for both the developing and developed worlds, according to an analysis...Nineteen countries facing the highest number of threats, including water and food shortages and greater exposure to natural disasters, are also among the world's 40 least peaceful countries, the IEP's first ecological threat register found. Many of the countries most at risk from ecological threats, including Nigeria, Angola, Burkina Faso and Uganda, are also predicted to experience significant population increases, the report noted, further driving mass displacements".177

175 https://www.washingtonpost.com/climate-environment/2020/09/22/climate-clock-week

176 https://www.economicsandpeace.org 177 https://www.theguardian.com/ environment/2020/sep/09/climate-crisis-coulddisplace-12bn-people-by-2050-report-warns At the United Nations General Assembly in late September – held virtually due to the ongoing coronavirus pandemic – in contrast with US Trump administration actions, many news outlets covered the pronouncements from Chinese President Xi Jinping to aim to have CO₂ emissions peak before 2030 and to achieve carbon neutrality before 2060.



President Xi Jinping of China addressed the United Nations General Assembly in New York via video in September. Photo: United Nations, *Reuters*.

Also, scientific findings and reports of recordbreaking warmth in the Northern Hemisphere media attention. For example, captured Guardian journalist Emily Holden reported, "This summer was the hottest ever recorded in the northern hemisphere, according to US government scientists. June, July and August were 1.17C (2.11F) above the 20th-century average, according to the National Oceanic and Atmospheric Administration (NOAA). The new record surpassed the summers of 2016 and 2019. Last month was also the second-hottest August ever recorded for the globe. The numbers put 2020 on track to be one of the five warmest years, according to NOAA. United Nations officials have warned that many countries are not prepared to advance climate ambitions, while the US faces a presidential election that will decide whether it will contribute to such global efforts or hinder them. With aggressive federal action, the US could cut its climate pollution almost in half by 2030 compared with 2005, according to the latest report from America's Pledge, a group

A Review of Media Coverage of Climate Change and Global Warming in 2020

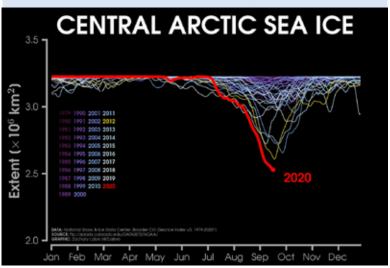
of private- and public-sector leaders. Even if Donald Trump wins reelection and largely ignores climate change, states, cities and businesses could still cut emissions by 37% by 2030, the report finds. The climate crisis is increasingly moving into the spotlight in the US presidential race. The Democratic nominee, Joe Biden, on Monday aggressively targeted Trump in remarks connecting historic wildfires in the western US to human-made climate change".¹⁷⁸

Also, in September there were many media accounts of the second lowest extent of Arctic sea ice on record, as announced by the National Snow and Ice Data Center (NSIDC) within the Cooperative Institute for Research in Environmental Sciences (CIRES) (where our MeCCO hub is also located). For example, USA Today correspondent Doyle Rice wrote, "Fueled by unusual warmth at the top of the world, Arctic sea ice shrank to

its second-lowest level on record... Arctic sea ice typically reaches its smallest extent in September and largest in March. The minimum was reached on Sept. 15 and measured 1.44 million square miles. This is about 958,000 square miles below average, according to a statement from NASA. This appears to be the lowest extent of the year, the National Snow and Ice Data Center said. In response to the setting sun and falling temperatures, ice extent will begin increasing through autumn and winter. However, a shift in wind patterns or a period of late-season melt could still push the ice extent lower. This year ranks behind only 2012, when the lowest level on record was measured. Arctic sea ice has been measured since 1979. The amount of summer sea ice in the Arctic has been steadily shrinking over the past few decades because of man-made global warming, according to the National Oceanic and Atmospheric Administration and NASA."179

178 https://www.theguardian.com/science/2020/sep/14/northern-hemisphere-record-hottest-summer-noaa 179 https://www.usatoday.com/story/news/nation/2020/09/21/arctic-sea-ice-global-warming-ice-shrinks-second-lowest-level/5855281002/

In September there were many media accounts of the **second lowest extent of Arctic sea ice** on record, as announced by the National Snow and Ice Data Center within the Cooperative Institute for Research in Environmental Sciences (where our MeCCO hub is also located).



Graphic: Zachary Labe. Source: https://nsidc.org/arcticseaicenews/charctic-interactive-sea-ice-graph.

Last, cultural themes continued to weave through many climate change or global warming stories in September. Several of these cultural stories also threaded through ecological and meteorological accounts described earlier. For example, journalist Jessica Guynn from USA Today wrote, "Facebook says it's moving aggressively to counter climatechange misinformation with a Climate Science Information Center that launched Tuesday and aims to connect users with science-based facts. "Climate change is real," the company said. "The science is unambiguous and the need to act grows more urgent by the day." The announcement comes just days after emergency responders in the Pacific Northwest had to fight misinformation on Facebook along with catastrophic wildfires, and ahead of Climate Week, a conference run by international nonprofit the Climate Group, in association with the United Nations and the city of New York...the success of Facebook's COVID-19 Information Center which has directed more than 2 billion people to information from health authorities shows that the company has not been limited by technology but by a lack of

A Review of Media Coverage of Climate Change and Global Warming in 2020

will, according to John Cook, a research assistant professor at the Center for Climate Change Communication at George Mason University". 180 Moreover, NBC News reporter Dylan Byers observed, "Facebook announced Tuesday that it is launching a science information center to provide users with facts and resources around the climate crisis. The new feature is the latest in a string of resource hubs that have enabled Facebook to set clear lines of demarcation on matters of fact and fiction. But Facebook will not change its approach to combating climate misinformation outside the hub. It will continue to apply warning labels to demonstrably false information, but will not take down posts unless they pose an immediate safety risk".181

As another cultural example, amid mounting experiential and scientific evidence of a changing climate, New York Times journalists Michael M. Grynbaum and Tiffany Hsu reported on ongoing conservative media and Trump Administration resistance to indications of climate change. In a piece entitled "Nothing to Do With Climate Change': Conservative Media and Trump Align on Fires', Grynbaum and Hsu wrote, "Rush Limbaugh told millions of his radio listeners to set aside any suggestion that climate change was the culprit for the frightening spate of wildfires ravaging California and the Pacific Northwest. "Man-made global warming is not a scientific certainty; it cannot be proven, nor has it ever been," Mr. Limbaugh declared on his Friday show, disregarding the mountains of empirical evidence to the contrary. He then pivoted to a popular right-wing talking point: that policies meant to curtail climate change are, in fact, an assault on freedom. "Environmentalist wackos" - Mr. Limbaugh's phrase - "want man to be responsible for it because they want to control your behavior," the conservative host said on the show. He added that they "want to convince you that your lifestyle choices are the reason why all

The world's richest 10% were responsible for 52% of all carbon emissions between 1990 & 2015.

- Oxfam & Stockholm Environment Institute report looking at cultures of consumption and climate change



Sprinklers in the street in Baghdad, Iraq, where temperatures reached 51C in July. Photo: Ahmad Al-Rubaye/AFP/Getty Images.

these fires are firing up out on the Left Coast." Hours later, that message leapt to prime time on Fox News, where the host Tucker Carlson said those who blamed climate change for the fires were merely reciting "a partisan talking point."... "In the hands of Democratic politicians, climate change is like systemic racism in the sky," Mr. Carlson told viewers. "You can't see it, but rest assured, it's everywhere, and it's deadly. And like systemic racism, it is your fault." Mr. Limbaugh and Mr. Carlson are two of the most prominent commentators in the right-wing media sphere, where a rich history of climate denialism has merged with Trump-era cultural warfare to generate a deep skepticism of the notion that climate change is a factor in the fires devastating the West Coast. Like President Trump, conservative media stars dismiss climate change - which scientists say is the primary cause of the conflagration - and point to the poor management of forestland by local (and, conveniently, Democratic) officials. Fringe rightwing websites, like The Gateway Pundit, have blamed left-wing arsonists, fueling false rumors that authorities say are impeding rescue efforts. Visiting California on Monday to witness the

¹⁸⁰ https://www.usatoday.com/story/tech/2020/09/15/facebook-climate-change-misinformation-disinformation-conspiracy-theories-wildfires/5799418002

¹⁸¹ https://www.nbcnews.com/tech/tech-news/facebook-unveils-new-climate-initiative-won-t-change-policy-misinformation-n1240091

A Review of Media Coverage of Climate Change and Global Warming in 2020

destruction firsthand, Mr. Trump took Western states to task for failing to manage the forests properly. During a meeting with California officials who pushed him to acknowledge the role of climate change in the wildfires, the president said: "It'll start getting cooler. You just watch.""182

Also, an Oxfam and Stockholm Environment Institute report looking at cultures consumption and climate change effects garnered media attention in September. Among their findings, they noted that world's richest 10% were responsible for 52% of all carbon emissions between 1990 and 2015. The report generated abundant media attention. example, Guardian environment correspondent Fiona Harvey reported, "The wealthiest 1% of the world's population were responsible for the emission of more than twice as much carbon dioxide as the poorer half of the world from 1990 to 2015, according to new research. Carbon dioxide emissions rose by 60% over the 25year period, but the increase in emissions from the richest 1% was three times greater than the increase in emissions from the poorest half. The report, compiled by Oxfam and the Stockholm Environment Institute, warned that rampant overconsumption and the rich world's addiction to high-carbon transport are exhausting the world's "carbon budget". Such a concentration of carbon emissions in the hands of the rich means that despite taking the world to the brink of climate catastrophe, through burning fossil fuels, we have still failed to improve the lives of billions, said Tim Gore, head of policy, advocacy and research at Oxfam International".183

Also, Fridays for Future climate demonstrations began again in September, capturing media attention around the globe with demonstrations in countries like China, Uganda, Philippines, Sierra Leone, Russia, Kenya, Sweden, the UK and the US. For example, Guardian journalist Fiona Harvey reported, "School pupils, youth activists and communities around the world have turned

182 https://www.nytimes.com/2020/09/15/business/media/wildfires-conservative-media.html
183 https://www.theguardian.com/environment/2020/sep/21/worlds-richest-1-cause-double-co2-emissions-of-poorest-50-says-oxfam

Fridays for Future climate demonstrations began again September, capturing media attention around the globe with demonstrations in countries like China, Uganda, Philippines, Sierra Leone, Russia, Kenya, Sweden, the UK and the US. "Social distancing and other Covid-19 control measures dampened the protests, but thousands of activists posted on social media and took to the streets to protest against the lack of climate action from world leaders."

- The Guardian



Supporters of the school strike movement Fridays for Future gather in Berlin, Germany, on September 25. Photo: Filip Singer/EPA.

out for a day of climate strikes, intended to underscore the urgency of the climate crisis even in the midst of the coronavirus pandemic. Social distancing and other Covid-19 control measures dampened the protests, but thousands of activists posted on social media and took to the streets to protest against the lack of climate action from world leaders. Strikes were scheduled in at least 3,500 locations around the globe. Friday's strikes - some in the form of mostly socially distanced physical marches on the streets, and some purely online meetings were on a smaller scale and far more subdued than last year's September week of action, in which at least 6 million people around the world were estimated to have taken part".

A Review of Media Coverage of Climate Change and Global Warming in 2020

OCTOBER

"Fossil fuels face a precarious future"



Built in 1906, this is the abandoned Glenwood Power Station in New York. Photo: Will Ellis.

Media coverage of climate change continued to rebound in terms of frequency of coverage since the low levels detected earlier in 2020. October media attention **increased globally by 2%** from September 2020. Nonetheless, coverage was still **down 30%** from coverage a year ago.

ctober 2020 was another month where media coverage of climate change or global warming continue to rebound in terms of frequency of coverage since the low levels detected earlier in 2020. October media attention increased globally by 2% from September 2020. Nonetheless, coverage was still down 30% from coverage a year ago (October 2019).

Regionally, October 2020 coverage increased from the previous month of September by 21% in Oceania, 24% in Asia, 32% in Latin America and 36% in the Middle East, while decreasing 5% in Europe and 12% in North America. Coverage held steady in Africa. At the country level, media coverage of climate change increased in Japan

(+29%), India (+37%), New Zealand (+45%), Norway (+11%), Russia (+42%), Spain (+10%) and Australia (+5%) in October 2020 from September 2020. Meanwhile, October 2020 coverage decreased in Canada (-26%), Denmark (-10%), Germany (-18%), Sweden (-10%), the United Kingdom (-10%) and the United States (US) (-1%) from September 2020.

Moving to the content of coverage, in October ecological and meteorological themes continued to dominate news stories connecting events and a changing climate. Among these developments, the unprecedented 2020 wildfire season in North America has sparked significant media attention paid to links between these conflagrations and warmer and drier conditions brought on by climate change. Fires in California,

A Review of Media Coverage of Climate Change and Global Warming in 2020

Oregon and Colorado prompted many stories in US media organizations and others around the world.

For Press example. Associated correspondent Jocelyn Gecker reported for PBS Newshour that "Deadly wildfires in California have burned more than 4 million acres (6,250 square miles) this year - more than double the previous record for the most land burned in a single year in the state. California fire officials said the state hit the astonishing milestone Sunday with about two months remaining in the fire season. The previous record was set two years ago when wildfires destroyed 1.67 million acres (2,609 square miles)... Many of the most destructive fires sparked in Northern California, where hills and mountains dotted with many dead trees have provided plenty of fuel for fires igniting amid high temperatures and strong winds fanning the flames. Thick, gray smoke from the blazes has fouled the air in many hill communities and major

cities in the San Francisco Bay Area and beyond. Numerous studies have linked bigger wildfires in America to climate change from the burning of coal, oil and gas. Scientists say climate change has made California much drier, meaning trees and other plants are more flammable"¹⁸⁴. Meanwhile, Los Angeles Times journalists Alex Wigglesworth and Joseph Serna noted, "Lightning in August ignited many of California's biggest blazes, but scientists say climate change has also contributed to the conflagrations. It was the hottest August on record in California, and trees and brush were already abnormally dry and combustible after Northern and Central California saw exceptionally dry conditions last winter".¹⁸⁵

Chronologically intertwined in unfolding ecologically- and meteorologically-themed climate change coverage, stories of hurricanes

184 https://www.pbs.org/newshour/nation/record-breaking-california-wildfires-surpass-4-million-acres 185 https://www.latimes.com/california/story/2020-10-04/california-fire-season-record-4-million-acres-burned

The unprecedented 2020 wildfire season in North America has sparked significant media attention paid to links between these conflagrations and warmer and drier conditions brought on by climate change. Fires in California, Oregon and Colorado prompted many stories in US media organizations and others around the world.



Firefighters battle the Glass Fire as it encroaches towards a residence in Calistoga, California, on October 1. Photo: Adrees Latif, *Reuters*.

making landfall in the Caribbean Basin and US Gulf Coast also flooded the public arena. To illustrate, journalist Jeff Berardelli from CBS News reported, "Delta's rapid intensification is no coincidence. Memorable storms like this season's Hurricane Laura, and past season storms like Michael and Harvey, have done the same. Over the past few decades, rapid intensification has been increasing by about 3 to 4 mph per decade due to hotter waters from human-caused climate change. That means a system in 1980 that may have intensified by 40 mph in 24 hours might now intensify at 55 mph in 24 hours"186. Meanwhile, Associated Press reporter Seth Borenstein noted, "Since 1982, the proportion of storms that rapidly intensify in the Atlantic has come close to around doubling, according to a study last year by Kossin and a team out of Princeton University. This year is particularly nasty and Delta is a good example, said study co-author Gabriel Vecchi, a Princeton climate scientist. That study also found this type

186 https://www.cbsnews.com/news/hurricane-delta-gulf-coast-atlantic-hurricane-season/

A Review of Media Coverage of Climate Change and Global Warming in 2020

of growing trend of rapid intensification cannot be explained by natural forces. Vecchi and Kossin said climate change, from the burning of coal, oil and natural gas, is clearly playing a major role. That's because two factors are key in storms getting stronger and weaker: fuel from hot water – and the type and direction of winds high up that have the potential for decapitating hurricanes or letting them get more powerful.".187

In October many stories of flooding and storm events like Tropical Storm Nangka, Tropical Storm Saudel and Typhoons Molave and Goni - making connections to climate change appeared in news accounts in outlets across Asia. For example, a report from The Indian Express noted, "India is leading a delegation of nations, including Bhutan, Sri Lanka, Bangladesh and Nepal, in sharing hydrological and meteorological data towards preparing flash flood forecasts...the frequency of extreme rainfall events has increased due to climate change and South Asia is highly prone to flash floods". 188 As another example, reporter Jiseok Kim posited in The South China Morning Post "according to the Intergovernmental Panel on Climate Change special report on the ocean, sea ice and glaciers, extreme sea level events that occurred once per century in the past in many coastal regions will become more frequent, perhaps even annual occurrences for many low-lying coastal areas by 2050. Will leaders in East Asia be able to deal with future floods that are bound to intensify due to accelerating global warming?"189 And journalist Nina Larson wrote a piece appearing in The Jakarta Post noting that the United Nations said "Global temperatures boosted by climate change will still be higher than usual despite the cooling effect of a "moderate to strong" La Nina weather phenomenon". 190 As an example of international

187 https://apnews.com/article/climate-climate-change-oceans-storms-weather-108ee106d20ab2ab 4880011b78e71981

188 https://indianexpress.com/article/india/to-tackle-flash-floods-issue-advance-warnings-imd-launches-guidance-system-for-south-asia-6856497 189 https://www.scmp.com/comment/opinion/article/3100420/after-yangtze-river-floods-and-hong-kongs-hottest-july-east-asia

190 https://www.thejakartapost.com/ news/2020/10/29/moderate-to-strong-la-nina-thisyear-un-.html "Delta's rapid intensification is no coincidence. Memorable storms like this season's Hurricane Laura, and past season storms like Michael and Harvey, have done the same. Over the past few decades, rapid intensification has been increasing by about 3 to 4 mph per decade due to hotter waters from human-caused climate change. That means a system in 1980 that may have intensified by 40 mph in 24 hours might now intensify at 55 mph in 24 hours". - CBS News



This October 8 photo shows Hurricane Delta in the Gulf of Mexico at 12:41 PM EDT. Photo: NOAA via AP.

media attention, in a story about Typhoon Molave New York Times journalist Yan Zhuang noted, "Before it moved west to Vietnam, the typhoon killed 16 people in the Philippines over the weekend, according to local news reports. Scientists say that global warming is fueling more frequent and more catastrophic storms and flooding across the world".¹⁹¹ As an example of international media attention to Typhoon Goni at the end of the month, New York Times journalists Hannah Beech and Jason Gutierrez commented, "climate change is exacerbating the Philippines' exposure to natural disasters, making it one of the most vulnerable countries on the planet".¹⁹²

191 https://www.nytimes.com/2020/10/28/world/asia/vietnam-typhoon-molave-landslide.html
192 https://www.nytimes.com/2020/11/01/world/asia/typhoon-goni-philippines-manila.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

In late October, further wildfire activity across the US West influenced media coverage connecting these fiery dots with a changing climate. "Scientific studies show that by increasing air temperatures and drying out soils and vegetation, climate change increases the frequency and severity of days with extreme fire risk. This is true in the West, but also in other parts of the world".

- The Washington Post

Figure 12. Front page coverage of California wildfires in October 27, 2020 in *The Los Angeles Times* with links made to a changing climate.

COP schalors confirm Barcett to high court in purities are vote and vote to high court in purities are vote and vote to high court in purities are vote and vote to high court in purities are vote high court in purities are vote to high court in purities are vot

Later in October, the ongoing Atlantic hurricane season continued to draw attention to global warming and climate change. The impacts from hurricane Epsilon and hurricane Zeta, in particular, drove coverage. For example, Washington Post journalist Matthew Cappucci reported, "Hurricane Epsilon rapidly intensified Tuesday and Wednesday, unexpectedly becoming a major Category 3 hurricane and claiming two records as it cruised northwest over the open Atlantic...It surprised meteorologists when it intensified into Category 3 major hurricane with 115 mph winds on Wednesday afternoon. That significantly exceeds the criterion for "rapid intensification" of 35 mph or more in 24 hours. Epsilon jumped at least 50 mph in that same time frame...Rapid intensification is probably a product of warming waters in the face of climate change. And more storms are likely to undergo rapid intensification in the future, presenting predictive challenges to meteorologists". 193

A week later, Associated Press journalists Kevin McGill, Stacey Plaisance and Rebecca Santana reported, "Hurricane Zeta slammed into the storm-weary Gulf Coast on Wednesday, pelting the New Orleans metro area with rain and howling winds that ripped apart buildings and knocked out power to thousands before rapidly making its way through Mississippi and Alabama with strong gusty winds, heavy rains and dangerous storm surge... An average season sees six hurricanes 193 https://www.washingtonpost.com/

weather/2020/10/21/hurricane-epsilon-bermuda-record

and 12 named storms. This extraordinarily busy season has focused attention on climate change, which scientists say is causing wetter, stronger and more destructive storms". 194

In late October, further wildfire activity across the US West influenced media coverage connecting these fiery dots with a changing climate. For example, *Washington Post* journalist Andrew Freedman reported, "Scientific studies show that by increasing air temperatures and drying out soils and vegetation, climate change increases the frequency and severity of days with extreme fire risk. This is true in the West, but also in other parts of the world". ¹⁹⁵

These ecological and meteorological stories then fed into *political* and *economic* media coverage of climate change or global warming in October. The changing climate stances of big banks, for instance, generated media attention. For example, *Wall Street Journal* correspondent David Benoit reported, "The U.S. is pulling out of the Paris climate accord, but the biggest U.S. bank is committing to it. JPMorgan Chase & Co. is pledging to use its financing weight to push clients to align with the Paris agreement and work toward global net zero-emissions by 2050. The bank said it would invest in technologies that

194 https://apnews.com/article/donald-trump-virusoutbreak-alabama-kay-ivey-mississippi-62ac94b1114 344c592f11fef63d5b87a

195 https://www.washingtonpost.com/weather/2020/10/26/california-wildfire-risk-santa-ana

A Review of Media Coverage of Climate Change and Global Warming in 2020

help reduce carbon emissions and will work with clients to cut their own carbon footprints. JPMorgan's bankers and advisers hold considerable sway in boardrooms around the globe. The bank plans to argue to clients that combating climate change opens the door to more capital from investors and reduces their risk of becoming outdated. Other banks have made various pledges to stop supporting Arctic drilling and coal companies. British banks NatWest Group PLC (the former RBS Group PLC) and Barclays PLC have both committed to using their business to further the Paris agreement, the 2015 deal that called on global governments to curb rising temperatures. Citigroup Inc. earlier this year said it would walk away from clients that aren't taking climate change seriously". 196

Also in October, China followed on President Xi Jinping's strong rhetoric on climate policy action at the UN General Assembly in

September with critiques of US climate policy action. This manifested in a 'factsheet' from the Chinese Ministry of Foreign Affairs accusing the Trump Administration of undermining global climate governance and cooperation. The US State department replied with its own 'China's Environmental Abuses Fact Sheet'. This back-and-forth attracted media attention. For example, Washington Post journalist Steven Mufson reported, "China delivered a diatribe against U.S. climate policies...saying that under President Trump, the United States "is widely viewed as a consensus-breaker and a troublemaker." Beijing's Foreign Affairs Ministry blamed Trump's "negative stance" and "retrogression on climate change" for undermining progress on an international climate accord. Trump, who plans to formally pull out of the Paris climate agreement the day after Election Day, had "seriously undermined the

196 https://www.wsj.com/articles/jpmorganpledges-to-push-clients-to-align-with-paris-climateagreement-11602018245

China followed on President Xi Jinping's strong rhetoric on climate policy action at the UN General Assembly with critiques of US climate policy action. This manifested in a 'factsheet' from the Chinese Ministry of Foreign Affairs accusing the Trump Administration of undermining global climate governance and cooperation. The US State department replied with its own 'China's Environmental Abuses Fact Sheet'.



Coalminers descend underground at a mine operated by Beijing Haohua Energy Resource. Photo: Ni Shaokang/VCG.

fairness, efficiency and effectiveness of global environmental governance," the ministry said in a fact sheet. The barrage from Beijing resembled the tit-for-tat criticism that China and the United States have traded on subjects such as human rights, trade and the expulsion of reporters and diplomats, but climate policies have been largely the exception. Not anymore". 197

In other political developments, media sources in Japan generated stories on new Japanese minister Suga's announcement of a new long-term carbon reduction target. For example, an *Asahi Shimbun* report noted, "Prime Minister Yoshihide Suga declared in his statement on the 26th that he would aim for virtually zero greenhouse gas emissions by 2050. This goal is the path of reduction needed to keep the global average temperature rise to 1.5 degrees Celsius compared to before the Industrial Revolution".¹⁹⁸

197 https://www.washingtonpost.com/climate-environment/2020/10/19/china-delivers-diatribe-against-us-climate-policies

198 https://www.asahi.com/articles/DA3S14676853.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

Meanwhile, reporting Yomiuri Shimbun observed, "Although emissions have been curtailed due to the economic stagnation caused by the spread of the new coronavirus infection, attention is being paid to what will happen with the economic recovery after the infection has subsided"199 while a piece in Mainichi Shimbun commented that the Japanese government "will request companies and others to further strengthen their measures". 200 Also in Japan in October, Environment minister Koizumi generated media attention as he talked about the promotion of post-carbon policies. For example, journalists Toru Ishii, Akemi Kanda, and Rokumi Mitobe from Asahi Shimbun reported, "Behind the fact that Prime Minister Yoshihide Suga set a net zero greenhouse gas in 2050, there is also the fact that he may be left behind in the international decarbonization trend. The government is appealing its stance of aiming for realization through technological innovation, but there are many issues that are difficult to judge, such as how to balance renewable energy and nuclear power plants and how much to limit coal-fired power".201

There were also many media stories about scientific research and findings about aspects of climate change or global warming in October. Early in the month, a UN report²⁰² on climate change, extreme weather and disasters garnered media accounts. For example, Associated Press correspondent Jamey Keaten reported, "In the wake of heat waves, global warming, forest fires, storms, droughts and a rising number of hurricanes, the U.N. weather agency warned Tuesday that the number of people who need international humanitarian help could rise 50% by 2030 compared to the 108 million who needed it worldwide in 2018. In a new report released with partners, the World Meteorological Agency says

199 https://www.yomiuri.co.jp/politics/20201022-OYT1T50067

200 https://mainichi.jp/articles/20201021/k00/00m/010/278000c

201 https://www.asahi.com/articles/ASNBV7VV9NBVULFA01J.html

202 https://www.undrr.org/publication/human-cost-disasters-overview-last-20-years-2000-2019

A U.N. report on climate change, extreme weather and disasters garnered media accounts. "In the wake of heat waves, global warming, forest fires, storms, droughts and a rising number of hurricanes, the U.N. weather agency Tuesday that warned the number people who need international humanitarian help could rise 50% by 2030 compared to the 108 million who needed it worldwide in 2018."

- The Associated Press



Smoke and haze from wildfires in Boulder County, Colorado. Photo: Ami Nacu-Schmidt.

more disasters attributed to weather are taking place each year. It said over 11,000 disasters have been attributed to weather, climate and phenomena like tsunamis that are related to water over the last 50 years - causing 2 million deaths and racking up \$3.6 trillion worth of economic costs. In one hopeful development over that period, the average number of deaths from each separate weather disaster per year has dropped by one-third, even as the number of such events and the economic costs from them have both surged. The 2020 State of Climate Services report, compiled by 16 international agencies and financing institutions, calls on governments to put more money into early-warning systems that can improve countries' ability to prepare for, respond to and mitigate the impact of such natural disasters".203

203 https://apnews.com/article/climate-climate-change-droughts-fires-united-nations-570076e5b2d 26e717bd072d0535b174c

A Review of Media Coverage of Climate Change and Global Warming in 2020

In mid-October the annual report from the International Energy Agency - assessing carbonbased and renewable energy generation - made a splash in the media. For example, in an article entitled 'Coronavirus Pandemic Speeds Shift to Cleaner Energy' journalists Russell Gold and David Houdari from The Wall Street Journal wrote, "The world's transition to cleaner sources of energy is gaining speed as the coronavirus pandemic accelerates a shift in investment away from fossil fuels, according to the International Energy Agency. Capital spending on energy this year is set to plunge by 18%, as global energy demand is expected to fall by 5% in 2020, a pullback not seen since World War II, the Paris-based agency said in its annual report on the future of the industry. But the projected investment cuts are highly uneven, highlighting a divergence in what companies, markets and investors are willing to finance. Spending on new oil and gas supplies took the largest hits, while renewable energy held up better than any other source, the IEA found. The pandemic weakened corporate balance sheets and increased uncertainty over future fuels demand, spurring the record cuts. Solar- and wind-energy projects are benefiting from falling costs, as well as widespread government support, and monetary policies that support low interest rates. The IEA expects renewables to provide 80% of the growth in global electricity demand through 2030".204 Furthermore, CNN reported Hanna Ziady noted, "Renewable energy, led by solar power, could make up 80% of the growth in electricity generation over the next decade... The International Energy Agency said it is now consistently cheaper to generate electricity by capturing the sun's energy than by burning coal or natural gas in most countries. Solar photovoltaic cells are now one of the cheapest sources of electricity in history thanks to maturing technologies and policies that have reduced the cost of investments...While fossil fuels face a precarious future, the prospects for renewable sources of power generation range from "strong to spectacular," with solar leading the charge". 205

204 https://www.wsj.com/articles/coronavirus-pandemic-speeds-shift-to-cleaner-energy-11602561601

205 https://www.cnn.com/2020/10/13/energy/iea-world-energy-outlook-2020/index.html

"Major social movements driven by young activists around climate change, gun safety and Black Lives Matter protests have led to an explosion of civic awareness among younger Americans, who are on track to turn out to vote in record numbers this election and could play a pivotal role in some key battleground states."

- The Washington Post



People march at around the White House and Black Lives Matter Plaza in Washington, DC. Photo: Rodney Choice, *The Associated Press*.

Last, cultural - while much less prominent in media accounts than in the previous month of September - continued to appear in climate change or global warming stories in October. For example, journalist Tim Wyatt from The Independent (London) reported, "BBC staff will normally be allowed to attend Pride marches, the director general has confirmed, after a day of speculation and anger at new impartiality guidelines" but journalists are told to "use own judgement on Black Lives Matter or climate change protests". 206 Meanwhile, in the context of the November 3 US presidential election journalist Michelle Ye Hee Lee from The Washington Post commented, "Major social movements driven by young activists around climate change, gun safety and Black Lives Matter protests have led to an explosion of civic awareness among younger Americans, who are

206 https://www.independent.co.uk/news/uk/homenews/bbc-pride-marches-lgbt-tim-davie-impartiality-social-media-b1448587.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

MeCCO tracked the word usage stemming from the May 2019 style guide shift in *The Guardian* from using the terms 'global warming' or 'climate change' to using 'global heating' or 'climate emergency' or 'climate crisis' or 'climate breakdown'. We compared the coverage of these terms as well as these terms combined with 'climate change' or 'global warming'. We then compared coverage with 'climate change' or 'global warming' coverage in *The New York Times* as well as *The Times of London*.

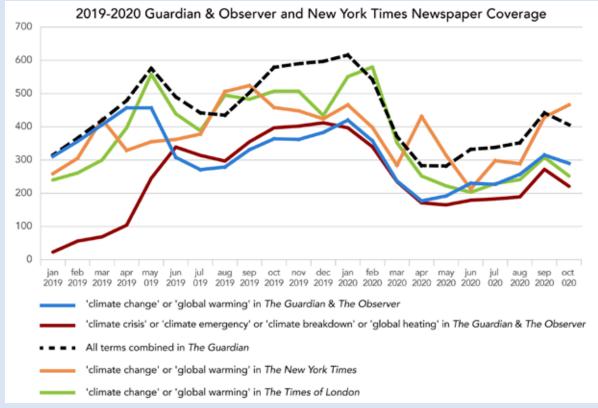


Figure 13. Coverage of 'climate crisis' or 'climate emergency' or 'climate breakdown' or 'global heating' in *The Guardian and Observer* compared to coverage of 'climate change' or 'global warming' in *The Times of London* and *The New York Times* as well as the *The Guardian and Observer* from Jan. 2019 through Oct. 2020. These trends are then compared with combined *The Guardian and Observer* of 'climate change' or 'global warming' or 'climate crisis' or 'climate emergency' or 'climate breakdown' or 'global heating' (noting that combined coverage is not a simple aggregate of the previous searches as some stories carried multiple terms in the same piece).

on track to turn out to vote in record numbers this election and could play a pivotal role in some key battleground states"²⁰⁷. Yet protests and demonstrations about climate change by groups such as 'Extinction Rebellion' and 'Fridays for Future' continued to generate media attention in outlets such as *The Guardian*²⁰⁸ and the *BBC*²⁰⁹.

.....

207 https://www.washingtonpost.com/politics/youthearly-vote/2020/10/29/506db1b6-1889-11eb-aeec-b93bcc29a01b_story.html

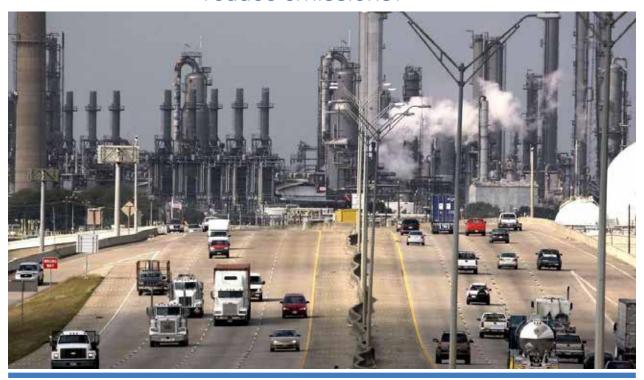
208 https://www.theguardian.com/australianews/2020/oct/12/scott-ludlam-faces-court-oversydney-climate-change-protest-arrest 209 https://www.bbc.com/news/world-54477523 This month MeCCO tracked the word usage stemming from the May 2019 style guide shift in *The Guardian*²¹⁰ from using the terms 'global warming' or 'climate change' to using 'global heating' or 'climate emergency' or 'climate crisis' or 'climate breakdown'. We compared the coverage of these terms as well as these terms combined with 'climate change' or 'global warming'. We then compared coverage with 'climate change' or 'global warming' coverage in *The New York Times* as well as *Times of London* (Figure 13).

210 https://theguardian.com/environment/2019/may/17/why-the-guardian-is-changing-the-language-it-uses-about-the-environment

A Review of Media Coverage of Climate Change and Global Warming in 2020

NOVEMBER

"What are YOU willing to change to help reduce emissions?"



A Shell refinery in Texas. The company was accused of 'endless greenwash' as Twitter users pointed out its contribution to the climate crisis. Photo: *Dallas Morning News*.



November 2020 saw media coverage of climate change around the world – in 120 sources across 54 countries – rise 18% from the previous month of October. However, the levels of coverage in November remained 18% lower than a year ago.

ovember 2020 saw media coverage of climate change or global warming around the world - in 120 sources across 54 countries - rise 18% from the previous month of October. However, the levels of coverage in November remained 18% lower than a year ago (November 2019). In particular, coverage across international wire services increased 30% from the previous month but was still down 26% from a year earlier. November 2020 coverage across global radio increased 10% from October 2020 and also increased 1% from November 2019.

Coverage in November increased in all regions except Africa (down 2%) from October 2020: coverage was up 33% in Oceania, up 23%

in Asia, up 14% in Europe, up 12% in Latin America, up 11% in the Middle East and up 9% in North America. Yet, coverage in November 2020 remained lower in all regions except Latin America (up 56%) and North America (up 2%) from a year earlier (November 2019): coverage was down 49% in both Africa and the Middle East, down 30% in Europe, down 29% in Oceania, and down 5% in Asia.

Among trends at the country level, media coverage of climate change rose most rapidly in November 2020 in Australia (+96%), Canada (+44%), Denmark and Sweden (both +33%), Spain (+31%), Japan (+28%) and the United Kingdom (UK) (+26%) compared to levels of coverage the previous month of October 2020. Trends were mixed in November, however. In

A Review of Media Coverage of Climate Change and Global Warming in 2020

contrast, media coverage of climate change or global warming dropped in Germany (-17%), the United States (-11%), New Zealand (-9%) and India (-9%). In our ongoing monitoring of US television sources, November 2020 coverage of climate change or global warming increased 11% from October 2020 but was still 3% lower than levels of coverage in November 2019.

From the quantity to the quality and content of coverage, *ecological* and *meteorological* themes continued to dominate news stories connecting events and a changing climate in the month of November like in previous recent months. Throughout November, news of cyclones, typhoons and hurricanes - with stories increasingly making links to a changing climate - punctuated the media landscape.

At the start of November, Super Typhoon Goni along with Typhoon Rolly stirred up international media

accounts. For example, correspondent Daisy Dunne from The Independent reported, "It was an apocalypse, a circumstance you can't even imagine. On social media, we saw floating bodies on flash floods," says Jacques Fallaria, a 19-year-old climate activist from Bulacan, the Philippines. "The situation we are in right now should send proof to our world leaders that climate change is real and institutions should be held accountable for what has just happened in our country"... Scientists have reasoned that the growing intensity of storms is likely linked to the climate crisis. This is because tropical cyclones use warm, moist air as fuel and, as oceans heat up, more of this fuel is becoming available".211 Journalist Minerva Newman from The Manila Bulletin reported that "Filipinos that are concerned about the impacts of climate change take actions to prepare for future disasters".²¹²

211 https://www.independent.co.uk/environment/climate-change/typhoon-goni-super-2020-philippines-climate-crisis-b1562346.html

212 https://mb.com.ph/2020/11/04/most-filipinos-fear-being-harmed-because-of-climate-change

Ecological and meteorological themes continued to dominate news stories connecting events and a changing climate in the month of November like in previous recent months. Throughout November, news of cyclones, typhoons and hurricanes – with stories increasingly making links to a changing climate – punctuated the media landscape.



Villagers wade on flood water brought by a lahar flow due to typhoon Goni at the foot of Mayon volcano in The Philippines. Photo: EPA.

As the month unfolded, Typhoon Vamco (or Ulysses) then wrought further havoc with 150 mile an hour winds upon landfall. Many news stories drew on this news hook of the fifth major storm in six weeks to impact the Philippines, as it was the seventh over this period to impact Vietnam. For example, Washington Post correspondents Regine Cabato and Miriam Berger reported, "Dozens are dead and whole villages remain underwater three days after Typhoon Vamco slammed into the Philippines, the third typhoon and fifth tropical cyclone to wallop the region in recent weeks... Mahar Lagmay, executive director of the University of the Philippines' Resilience Institute, cautioned that as the climate crisis worsens and the scale of flooding increases, the government must act by mapping out and communicating these unprecedented threats to residents". 213

Meanwhile, in the ongoing Atlantic hurricane season, hurricanes Eta and lota both caused 213 https://www.washingtonpost.com/world/2020/11/14/dozens-dead-villages-submerged-days-after-typhoon-vamco-pummels-philippines

A Review of Media Coverage of Climate Change and Global Warming in 2020

extensive damage in Nicaragua, Honduras and Guatemala, also impacting other neighboring countries in Central America and in the Caribbean. As an illustration, reports from the Southern Honduran community of Duyure, Choluteca described damage to homes, a washed out highway and severe crop losses. Many international news accounts made connections during this time between hurricanes and climate change. For example, New York Times journalist Veronica Penney wrote an extensive piece about '5 Things We Know about Climate Change and Hurricanes'. 214 As subtropical storm Theta became the 29th named storm of the 2020 hurricane season (a new record for the number of storms), she commented, "Scientists can't say for sure whether global warming is causing more hurricanes, but they are confident that it's changing the way storms behave." As another example, reporting for the Guardian, journalist Jeff Hirst in Honduras commented, "Climate scientists say that this year's record-breaking hurricane season and the "unprecedented" double blow for Central America has a clear link to the climate crisis...The evidence of the influence of the climate crisis is not so much in the recordbreaking 30 tropical storms in the Atlantic so far this year, but the strength, rapid intensification and total rainfall of these weather systems". 215

As the month wore in Cyclone Nivar made news as it slammed into Southern India. A subset of the many news reports connected the dots between the storm and climate change. For example, New York Times correspondents Emily Schmall and Hari Kumar reported, "A severe cyclone made landfall in eastern India early Thursday, killing at least three people and lashing coastal areas off the Bay of Bengal with strong winds and heavy rain. Cyclone Nivar, the fourth named storm in the North Indian Ocean this year, struck near Puducherry, a city about 90 miles south of the manufacturing hub of Chennai in the state of Tamil Nadu. The storm weakened significantly on landfall and has continued to weaken as it

214 https://www.nytimes.com/2020/11/10/climate/climate-change-hurricanes.html

215 https://www.theguardian.com/ environment/2020/nov/15/scientists-link-recordbreaking-hurricane-season-to-climate-crisis Many political and economic themed media stories about climate change or global warming also were abundant. Beginning the month, the news of the US Trump Administration's official exit from the United Nations Paris Climate Agreement generated media attention.



The Eiffel Tower is illuminated in Paris on November 4, 2016, when the Paris climate accord took effect. Photo: Patrick Kovarik/AFP/Getty Images.

moved northwest... Cyclones have grown more intense and more frequent across South Asia as climate change has resulted in warmer sea temperatures".²¹⁶

In November, many political and economic themed media stories about climate change or global warming also were abundant. Beginning the month, the news of the US Trump Administration's official exit from the United Nations Paris Climate Agreement generated media attention. For example, Washington Post journalists Steven Mufson and Brady Dennis reported, "The exit of the world's largest economy - and the second biggest emitter of greenhouse gases after China - comes three years to the day after President Trump began the drawn-out legal process of withdrawing the nation from the 2015 Paris climate accord. But whether the U.S. exit turns out to be brief or lasting depends on the outcome of the presidential contest. A

216 https://www.nytimes.com/2020/11/25/world/asia/india-cyclone-nivar.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

second Trump term would make clear that an international effort to slow the Earth's warming will not include the U.S. government. Democratic presidential candidate Joe Biden, meanwhile, has vowed to rejoin the Paris accord as soon as he is inaugurated, and to make the United States a global leader on climate action".217 Furthermore, Associated Press correspondent Seth Borenstein noted, "What happens on election day will to some degree determine how much more hot and nasty the world's climate will likely get, experts say".218

A few days later, *Bloomberg* journalist Jennifer A. Dlouhy wrote in *The Washington Post*, "Even with the involvement of the U.S., the world's second-largest producer of carbon dioxide emissions, the global response to climate change faced an uphill battle. Then President Donald Trump pulled the U.S. out of the Paris Agreement on global warming. The threat of

climate change presented one of the starkest contrasts between Trump and Joe Biden in the 2020 presidential race. Now, after winning the election, Biden will get a chance to see through his pledge to sign the U.S. back into the Paris accord as soon as he can".²¹⁹

These stories emerged against an uncertain backdrop of a still uncertain US Presidential Election result. In contrast to the Trump Administration stance, the now-President Elect Joe Biden promised to rejoin the Paris Agreement on his first day in office (January 20, 2021). Stories threaded these considerations together in a blanket of uncertainty, worry and woe. For example, on November 4th BBC

217 https://www.washingtonpost.com/climate-environment/2020/10/30/us-paris-climate-agreement-trump-biden

218 https://apnews.com/article/election-2020-donald-trump-climate-climate-change-paris-e6db58 93841465bab91f18d8fde8b800

219 https://www.washingtonpost.com/business/energy/what-bidens-win-means-for-the-paris-climate-agreement/2020/11/10/b420d496-2369-11eb-9c4a-0dc6242c4814_story.html

The eventual win of the US election by President-elect Joe Biden and Vice President-elect Kamala Harris led to stories of transition teams and their relationship to coordinated climate policy action. "Biden identified climate change as one of his top priorities as president, saying Americans must marshal the "forces of science" in the "battle to save our planet". - The Washington Post



Photo: Demetrius Freeman, The Washington Post.

journalist Matt McGrath reported, "After a threeyear delay, the US has become the first nation in the world to formally withdraw from the Paris climate agreement. President Trump announced the move in June 2017, but UN regulations meant that his decision only takes effect today, the day after the US election. The US could rejoin it in future, should a president choose to do so". 220 Meanwhile, Associated Press journalists Frank Jordans and Seth Borenstein noted, "The move, long threatened by U.S. President Donald Trump and triggered by his administration a year ago, further isolates Washington in the world but has no immediate impact on international efforts to curb global warming. Still, the U.N. agency that oversees the treaty, France as the host of the 2015 Paris talks and three countries currently chairing the body that organizes them - Chile, Britain and Italy – issued a joint statement expressing regret at the U.S. withdrawal".²²¹

220 https://www.bbc.com/news/science-environment-54797743

221 https://apnews.com/article/us-leaves-parisagreement-climate-change-1331bc30021756454dd a8eb7ff3c1075

A Review of Media Coverage of Climate Change and Global Warming in 2020

The eventual win of the US election by President-elect Joe Biden and Vice President-elect Kamala Harris then led to stories of transition teams and appointments and their relationship to concerted climate policy action. For example, the day after the election was decided (November 7th) Washington Post journalists Juliet Eilperin, Dino Grandoni and Darryl Fears reported, "Joe Biden, the projected winner of the presidency, will move to restore dozens of environmental safeguards President Trump abolished and launch the boldest climate change plan of any president in history. While some of Biden's most sweeping programs will encounter stiff resistance from Senate Republicans and conservative attorneys general, the United States is poised to make a 180-degree turn on climate change and conservation policy. Biden's team already has plans on how it will restrict oil and gas drilling on public lands and waters; ratchet up federal mileage standards for cars and SUVs; block pipelines that transport fossil fuels across the country; provide federal incentives to develop renewable power; and mobilize other nations to make deeper cuts in their own carbon emissions. In a victory speech Saturday night, Biden identified climate change

as one of his top priorities as president, saying Americans must marshal the "forces of science" in the "battle to save our planet".²²²

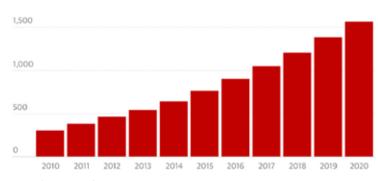
As another example, a few days later *New York Times* correspondents Michael D. Shear and Lisa Friedman noted, "President-elect Joseph R. Biden Jr. is poised to unleash a series of executive actions on his first day in the Oval Office, prompting what is likely to be a years long effort to unwind President Trump's domestic agenda and immediately signal a wholesale shift in the United States' place in the world. In the first hours after he takes the oath of office on the

222 https://www.washingtonpost.com/climate-environment/2020/11/07/biden-climate-change-monuments

November news emerged about ln how renewable energy industries have been arowina during the COVID-19 pandemic."Global renewable electricity installation will hit a record level in 2020. according to the International Energy Agency, in sharp contrast with the declines caused by the coronavirus pandemic in the fossil fuel sectors. The IEA report says almost 90% of new electricity generation in 2020 will be renewable, with just 10% powered by gas and coal." - The Guardian

Global renewable energy capacity has grown fivefold since 2010

Gigawatts (excluding hydropower) 2,000



Guardian Graphic. Source: IEA.

West Front of the Capitol at noon on Jan. 20, Mr. Biden has said, he will send a letter to the United Nations indicating that the country will rejoin the global effort to combat climate change, reversing Mr. Trump's decision to withdraw from the Paris climate accord with more than 174 countries".²²³

Meanwhile, in November news emerged about how renewable energy industries have been growing during the COVID-19 pandemic as fossil fuel industries have faced waning demand. Many stories related these developments to climate change. For example, *Guardian* correspondent Damian Carrington reported, "Global renewable electricity installation will hit a record level in

223 https://www.nytimes.com/2020/11/08/us/politics/biden-trump-executive-action.html

A Review of Media Coverage of Climate Change and Global Warming in 2020







Figure 14. Front pages of *The Daily Mail, The Daily Telegraph* and *The Times* in the days following the UK Prime Minister's 'Green Industrial Revolution' announcement in November 2020.

2020, according to the International Energy Agency, in sharp contrast with the declines caused by the coronavirus pandemic in the fossil fuel sectors. The IEA report²²⁴ published on Tuesday says almost 90% of new electricity generation in 2020 will be renewable, with just 10% powered by gas and coal. The trend puts green electricity on track to become the largest power source in 2025, displacing coal, which has dominated for the past 50 years. Growing acceptance of the need to tackle the climate crisis by cutting carbon emissions has made renewable energy increasingly attractive to investors. The IEA reports that shares in renewable equipment makers and project developers have outperformed most major stock market indices and that the value of shares in solar companies has more than doubled since December 2019".²²⁵

Related to COVID-19 and renewable energy news, many stories in November picked up on the UK Prime Minister Boris Johnson's release of his Green Industrial Revolution recovery plan. For example, journalist Roger Harrabin from BBC reported, "New cars and vans powered wholly by petrol and diesel will not be sold in the UK from 2030, Prime Minister Boris Johnson has said. But some hybrids would still be allowed, he confirmed. It is part of what Mr Johnson calls a "green industrial revolution" to tackle climate

224 https://www.iea.org/reports/renewables-2020 225 https://www.theguardian.com/ environment/2020/nov/10/renewable-energy-covid-19-record-growth-2020 change and create jobs in industries such as nuclear energy. Critics say the £4bn allocated to implement the 10-point plan is far too small for the scale of the challenge. The total amount of new money announced in the package is a 25th of the projected £100bn cost of high-speed rail, HS2".226 Meanwhile, Guardian correspondents Peter Walker and Jessica Elgot commented, "Boris Johnson has announced plans for the government's self-styled green industrial revolution, bringing praise from environmental groups but also questions about the scale of new funding, and the planned expansion of nuclear and hydrogen power. In a move aimed at retaking the initiative after a politically turbulent few weeks, the prime minister said the 10-point plan would create up to 250,000 jobs, with much of the focus aimed at the north of England, Midlands, Scotland and Wales". 227

In November, political and economic stories intersected with *cultural* dimensions of climate change. Such a story emerged early in the month when Shell Oil - the company with the 7th highest emissions globally - asked a seemingly benign, but tone deaf question on Twitter: 'what are you willing to change to help reduce emissions?' That casting of the challenge onto individuals sparked immediate replies. These

226 https://www.bbc.com/news/science-environment-54981425227 https://www.theguardian.com/environment/2020/nov/17/boris-johnson-announces-10-point-green-plan-with-250000-jobs

A Review of Media Coverage of Climate Change and Global Warming in 2020

exchanges on social media were then covered in newspaper, TV and radio reports. For example, Guardian correspondent Damian Carrington reported, "A climate poll on Twitter posted by Shell has backfired spectacularly, with the oil company accused of gas lighting the public. The survey, posted on Tuesday morning, asked: "What are you willing to change to help reduce emissions?" Though it received a modest 199 votes the tweet still went viral - but not for the reasons the company would have hoped. The US congresswoman Alexandria Ocasio-Cortez was one high-profile respondent, posting a tweet that was liked 350,000 times...Greta Thunberg accused the company of "endless greenwash", while the climate scientist Prof Katharine Hayhoe pointed out Shell's huge contribution to the atmospheric carbon dioxide that is heating the planet. Shell then hid her reply, she said. Another climate

scientist, Peter Kalmus, was more direct, and said the company was gas lighting the public by suggesting individual actions could stop the climate crisis, rather than systemic change to the fossil fuel industry. Some Twitter users saw irony in this, while others asked if the company was "out of its mind".²²⁸ And continuing with critiques, *The Daily Mirror* called the plan "more style than substance".²²⁹

Also, on the heels of the US Presidential election, various social movements noted their roles in raising visibility of climate and environment issues as well as contributing to the victory of Joe Biden. For example, *Guardian* journalist Oliver Milman reported on the Sunrise Movement, noting "Joe Biden will have to navigate a path for the most

228 https://www.theguardian.com/business/2020/nov/03/shells-climate-poll-on-twitter-backfires-spectacularly

229 https://www.mirror.co.uk/news/uk-news/voice-mirror-governments-green-economy-23032948

In November, political and economic stories intersected with cultural dimensions of climate change. Such a story emerged early in the month when Shell Oil – the company with the 7th highest emissions globally – asked a seemingly benign, but tone deaf question on Twitter: 'what are you willing to change to help reduce emissions?'



Figure 15. Shell Oil's initial Tweet followed by three selected responses.

ambitious climate agenda ever adopted by a US president through not only stubborn Republican obstruction but also an emergent youth climate movement that is already formulating plans to hold him to account".²³⁰

There were also many media stories about scientific research and findings about aspects of climate change or global warming in November. Prominently among them was media coverage of a study²³¹ published in *Nature* that found that "warmer sea surface temperatures induce a slower decay by increasing the stock of moisture that a hurricane carries as it hits land" and "as the world continues to warm, the destructive power of hurricanes will extend progressively farther inland". As an example of media attention and discussion, Associated Press journalist Seth

230 https://www.theguardian.com/us-news/2020/ nov/16/joe-biden-climate-crisis-ennvironmentenergy

231 https://www.nature.com/articles/s41586-020-2867-7

A Review of Media Coverage of Climate Change and Global Warming in 2020

Borenstein reported that the study "looked at 71 Atlantic hurricanes with landfalls since 1967. It found that in the 1960s, hurricanes declined two-thirds in wind strength within 17 hours of landfall. But now it generally takes 33 hours for storms to weaken that same degree". Borenstein also noted that the study found that "warmer ocean waters from climate change are likely making hurricanes lose power more slowly after landfall, because they act as a reserve fuel tank for moisture".²³²

In mid-November, a World Meteorological Organization report - noting that greenhouse gas concentrations in the atmosphere reached 410.5 parts per million - garnered considerable media attention. For example, BBC journalist Matt McGrath reported, "The global response to the Covid-19 crisis has had little impact on the continued rise in atmospheric concentrations of CO₂...This year carbon emissions have fallen dramatically due to lockdowns that have cut transport and industry severely. But this has only marginally slowed the overall rise in concentrations"233. Meanwhile, Guardian correspondent Damian Carrington noted, "There is estimated to have been a cut in emissions of between 4.2% and 7.5% in 2020 due to the shutdown of travel and other activities. But the WMO said this was a "tiny blip" in the continuous buildup of greenhouse gases in the air caused by human activities, and less than the natural variation seen year to year".234

In late November, a study in Science magazine - that found that trees are counterintuitively dropping their leaves earlier in a warmer climate²³⁵ - sparked many media stories. For example US *National Public Radio* host Ari Shapiro reported, "Constantin Zohner is a climate change biologist at the Swiss Federal Institute of Technology. And he says the effects of global warming - hotter temperatures deeper into the

232 https://apnews.com/article/us-news-climate-climate-change-oceans-florida-f1076d47581e37962e0872af83c3808c 233 https://www.bbc.com/news/science-environment-55018581

234 https://www.theguardian.com/ environment/2020/nov/23/climate-crisis-co2-hitsnew-record-despite-covid-19-lockdowns

235 https://science.sciencemag.org/content/370/6520/1066/tab-article-info

"The global response to the Covid-19 crisis has had little impact on the continued rise in atmospheric concentrations of CO_2 ... This year carbon emissions have fallen dramatically due to lockdowns that have cut transport and industry severely. But this has only marginally slowed the overall rise in concentrations". - BBC



Despite the fall off in airline and other transportation, CO₂ levels are on the rise. Photo: Getty Images.

year - led scientists to predict that trees would drop their leaves weeks later by the end of this century. Now his team says the opposite may be true. Writing in the journal Science, they say leaves may actually fall a few days earlier in the future. And the reason...climate change". 236 As a second example, CNN correspondent Amy Woodyatt noted, "Trees will start to shed their leaves earlier as the planet warms, a new study has suggested, contradicting previous assumptions that warming temperatures are delaying the onset of fall. Every year, in a process known as senescence, the leaves of deciduous trees turn yellow, orange and red as they suspend growth and extract nutrients from foliage, before falling from the tree ahead of winter. Leaf senescence also marks the end of the period during which plants absorb carbon dioxide through photosynthesis. Global warming has resulted in longer growing seasons -- spring leaves are emerging in European trees about two weeks earlier, compared with 100 years ago, researchers said".237

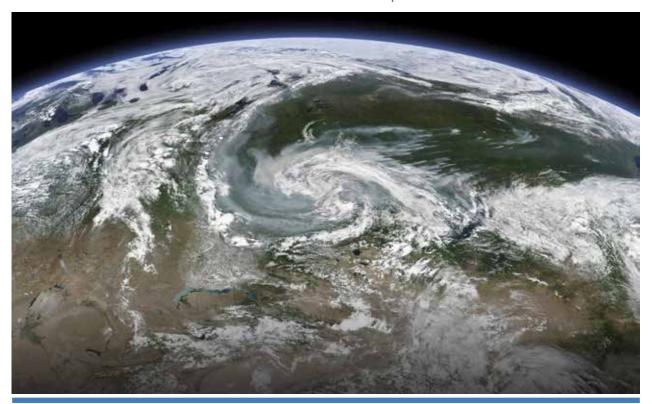
236 https://www.npr.org/2020/11/26/939367464/researchers-predict-that-autumn-leaves-might-start-falling-earlier-in-the-future

237 https://www.cnn.com/2020/11/27/europe/fall-leaves-intl-scli-climate-scn/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

DECEMBER

"The state of the planet is broken"



Winds carry plumes of smoke in Russia, center right, toward the southwest, mixing with a swirling storm system. Photo: Joshua Stevens/NASA Earth Observatory/*AP*.



December 2020 saw media coverage of climate change or global warming around the world **dip 17% below** coverage from November 2020 and **33% below** levels of media coverage a year earlier.

ecember 2020 saw media coverage of climate change or global warming around the world dip 17% below coverage from November 2020 and 33% below levels of media coverage a year earlier (December 2019).

Decreased media attention to climate change or global warming was evident in eight of the 13 countries we in the Media and Climate Change Observatory (MeCCO) monitor monthly: the exceptions with increasing coverage compared to November 2020 were Canada (up 37%), Denmark (up 25%), India (up 12%), Russia (up 92%) and Sweden (up 25%). Higher levels of Canadian media coverage of climate change also led to an increase in North American coverage from November 2020 (up 9%) even though US newspaper coverage dropped 18%.

Otherwise, media coverage of climate change or global warming decreased across global radio (-24%) and wire services (-28%) as well as in Africa (-3%), Asia (-24%), Europe (-16%), Latin America (-33%), the Middle East (-16%), and Oceania (-27%). Furthermore, coverage was down in Australia (-25%), Germany (-13%), Japan (-2%), New Zealand (-30%), Norway (-11%), Spain (-22%), the United Kingdom (UK) (-27%), the United States (US) newspapers (-18%) and US television (-38%).

From the quantity to the quality and content of coverage, many *political* and *economic* themed media stories emerged in December about climate change or global warming. To begin, in early December fourteen countries committed to reducing shipping emissions, increasing offshore renewable capacity and other issues relating to ocean sustainability. The climate change-related

A Review of Media Coverage of Climate Change and Global Warming in 2020

dimensions of these commitments earned coverage. For example, Guardian environment correspondent Fiona Harvey reported, "Governments responsible for 40% of the world's coastlines have pledged to end overfishing, restore dwindling fish populations and stop the flow of plastic pollution into the seas in the next 10 years. The leaders of the 14 countries set out a series of commitments on Wednesday that mark the world's biggest ocean sustainability initiative, in the absence of a fully-fledged UN treaty on marine life. The countries - Australia, Canada, Chile, Fiji, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Palau and Portugal - will end harmful subsidies that contribute to overfishing, a key demand of campaigners. They will also aim to eliminate illegal fishing through better enforcement and management, and to minimise bycatch and discards, as well as implementing national fisheries plans based on scientific advice. Each of the countries, members of the High Level Panel for Sustainable Ocean Economy, has also pledged to ensure that all the areas of ocean within its own national jurisdiction - known as exclusive economic zones - are managed sustainably by 2025. That amounts to an area of ocean roughly the size of Africa".238

Also in early December, the fifth anniversary of the Paris Climate Agreement was a milestone marked with media coverage of progress as well as scaled-up engagements going forward in the next five years. For example, Korea Times reporters Frank Rijsberman and Ingvild Solvang commented, "As 2020 comes to a close, the date is fast approaching for all parties to the Paris Climate Agreement to submit their updated commitments, or NDCs that specifically delineate how each country will meet the common climate goals within the United Nations framework. Due to the COVID-19 pandemic, COP26 climate talks were postponed to 2021, and instead a series of virtual events including the Climate Ambition Summit was held on Dec. 12, where countries could give updates on their adjusted NDCs. Much has happened in recent months. While the Republic of Korea did not show very ambitious

238 https://www.theguardian.com/ environment/2020/dec/02/global-sustainablefishing-initiative-agreed-by-14-countries The fifth anniversary of the Paris Climate Agreement was a milestone marked with media coverage of progress as well as scaled-up engagements going forward in the next five years.



Activists light candles showing the slogan 'Fight For 1 Point 5' on the occasion of the fifth anniversary of the signing of the Paris Climate Agreement, in Berlin on December 11, 2020. Photo: Britta Pedersen/dpa via AP.

NDC targets earlier this year, President Moon Jae-in announced net zero ambitions for 2050". 239 As another example, Associated Press reporters Frank Jordans and Jeff Schaeffer observed, "U.S. President-elect Joe Biden pledged Saturday to rejoin the Paris climate accord on the first day of his presidency, as world leaders staged a virtual gathering to celebrate the fifth anniversary of the international pact aimed at curbing global warming. Heads of state and government from over 70 countries took part in the event - hosted by Britain, France, Italy, Chile and the United Nations – to announce greater efforts in cutting the greenhouse gas emissions that fuel global warming. The outgoing administration of President Donald Trump, who pulled Washington out of the Paris accord, wasn't represented at the online gathering. But in a written statement sent shortly before it began, Biden made clear the U.S. was waiting on the sidelines to join again and noted that Washington was key to negotiating the 2015 agreement, which has since been ratified by almost all countries around the world". 240

239 http://www.koreatimes.co.kr/www/nation/2020/12/113_301611.html

240 https://apnews.com/article/europe-climate-climate-change-paris-france-6e21f86b5c4affaee8ee0 4e870a1ea6c

A Review of Media Coverage of Climate Change and Global Warming in 2020

Meanwhile, Guardian journalist Fiona Harvey noted, "The world is still not on track to fulfil the 2015 Paris climate agreement, the UK's business secretary Alok Sharma warned, after a summit of more than 70 world leaders on the climate crisis ended with few new commitments on greenhouse gas emissions".241 Furthermore, Independent journalist Daisy Dunne "asked scientists, politicians and activists from across the world to describe what they would like to see happen within the next five years to see the world shift to be in line with the goals of the Paris Agreement". 242 And Daily Star (Lebanon) journalists Jitendra Joshi, Anna Malpas and Patrick Galey wrote, "UN chief Antonio Guterres on Saturday urged world leaders to declare a "state of climate emergency" and shape greener growth after the coronavirus pandemic, as he opened a summit marking five years since the landmark Paris Agreement. The Climate Ambition Summit, being held online, comes as the United Nations warns current commitments to tackle rises in global temperatures are inadequate. The commitments made in Paris in 2015 were "far from enough" to limit temperature rises to 1.5 degrees Celsius, the UN secretary-general said in his opening address to the summit, which is cohosted by Britain and France". 243

Also in December, ExxonMobil declared its intent to reduce greenhouse gas emissions intensity. Descriptive accounts as well as sharp critiques about these commitments - short of clear decarbonization promises - were pervasive in media accounts of this declaration. For example, journalist Christopher M. Matthews from *The Wall Street Journal* reported, "Exxon Mobil Corp pledged to reduce greenhouse-gas emissions from its operations over the next five years and eliminate routine flaring of methane by 2030, responding to pressure from activists and investors to lower its carbon footprint. The Texas-based oil giant said Monday that it

241 https://www.theguardian.com/environment/2020/dec/12/world-is-in-danger-of-missing-paris-climate-target-summit-is-warned 242 https://www.independent.co.uk/environment/climate-change/paris-agreement-anniversary-climate-change-b1770243.html

243 https://www.dailystar.com.lb/News/World/2020/Dec-12/515298-un-chief-urges-global-summit-to-declare-climate-emergency.ashx

In December, ExxonMobil declared its intent to reduce greenhouse gas emissions intensity. Descriptive accounts as well as sharp critiques about these commitments – short of clear decarbonization promises – were pervasive in media accounts of this declaration.



Protesters gathered outside ExxonMobil's annual shareholder meeting in May 2019. Photo: 350.org/CC BY-NC-SA 2.0.

would cut the "intensity" of emissions from its oil-and-gas production by 15% to 20% by 2025. It didn't provide hard numbers on exactly how much of total emissions those reductions would represent. The company also said it would end routine flaring, or burning, of methane from its oil-and-gas operations in the next 10 years. Methane is a potent greenhouse gas that, like carbon dioxide, contributes to climate change, according to the Environmental Protection Agency. The targets are related to emissions that come directly from Exxon's operations and not from its products, like gasoline and jet fuel. Exxon said it would begin disclosing emissions data related to its products next year".244 Meanwhile, CNBC reporter Eric Rosebaum noted, "A week after multiple activist investor groups targeted Exxon Mobil for recent financial underperformance as well as climate change concerns, the oil giant has released a new fiveyear plan to reduce greenhouse gas emissions. The company stressed that the plan has been in the works for months – its previous five-year plan through 2020 is drawing to a close - but

244 https://www.wsj.com/articles/exxon-promises-to-cut-greenhouse-gas-emissions-end-flaring-by-2030-11607957820

A Review of Media Coverage of Climate Change and Global Warming in 2020

it also noted in outlining new carbon goals that the plan "includes input from shareholders". ²⁴⁵

In December, many cultural themes emerged in stories about climate change or global warming. For example, media coverage of ongoing challenges in Honduras, Guatemala and Nicaragua from the previous month's Hurricanes Eta and lota garnered media discussions. For example, Washington Post journalist Kevin Sieff reported, "Weeks after Hurricanes Eta and Iota struck Central America in quick succession, nearly 100,000 Hondurans are living in shelters, many of which have become coronavirus hotspots. The country's economy has been paralyzed. It is an unprecedented crisis, Honduran President, Juan Orlando Hernández said in an interview with The Washington Post on Friday. Hernández warned that in the absence of a coordinated international response, migration from Honduras to the United States could surge... Hernández and several other senior Honduran officials visited Washington this week to lobby for a humanitarian assistance package from multilateral organizations such as the World Bank and from the U.S. government. He stressed the link between the hurricanes and climate change, suggesting that wealthier countries that emit more greenhouse gases have a debt to pay in the recovery effort".²⁴⁶

New York Times correspondent Natalie Kitroeff added, "Already crippled by the coronavirus pandemic and the resulting economic crisis, Central America is now confronting another catastrophe: The mass destruction caused by two ferocious hurricanes that hit in quick succession last month, pummeling the same fragile countries, twice. The storms, two of the most powerful in a record-breaking season, demolished tens of thousands of homes, wiped out infrastructure and swallowed vast swaths of cropland. The magnitude of the ruin is only beginning to be understood, but its repercussions are likely to

245 https://www.cnbc.com/2020/12/14/exxon-mobil-begins-to-mount-defense-of-itself-and-a-bigas-activists-circle.html

246 https://www.washingtonpost.com/world/the_americas/honduras-requests-tps-status-trump-administration/2020/12/04/22a076d8-35ad-11eb-8d38-6aea1adb3839_story.html

In December, many *cultural* themes emerged in stories about climate change or global warming. For example, media coverage of ongoing challenges in Honduras, Guatemala and Nicaragua from the previous month's Hurricanes Eta and lota garnered media discussions.



A wire basket attached to a zip line where a bridge used to be in Jocotán, Guatemala. Photo: Daniele Volpe, *The New York Times*.

spread far beyond the region for years to come. The hurricanes affected more than five million people - at least 1.5 million of them children - creating a new class of refugees with more reason than ever to migrate. Officials conducting rescue missions say the level of damage brings to mind Hurricane Mitch, which spurred a mass exodus from Central America to the United States more than two decades ago... If the devastation does set off a new wave of immigration, it would test an incoming Biden administration that has promised to be more open to asylum seekers, but may find it politically difficult to welcome a surge of claimants at the border. In Guatemala and Honduras, the authorities readily admit they cannot begin to address the misery wrought by the storms. Leaders of both countries last month called on the United Nations to declare Central America the region most affected by climate change, with warming ocean waters making many storms stronger and the warmer atmosphere making rainfall from hurricanes more ruinous". 247

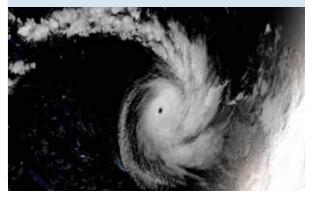
247 https://www.nytimes.com/2020/12/04/world/americas/guatemala-hurricanes-mudslide-migration.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

In December, the death of a 9-year-old UK citizen named Ella Adoo-Kissi-Debrah from 'exposure to air pollution' generated media attention who made links to climate change. For example, CBS News journalist Haley Ott reported, "Air pollution "made a material contribution" to the death of nine-year-old London schoolgirl Ella Kissi-Debrah, a U.K. coroner ruled on Wednesday. The landmark ruling is the first time air pollution has been officially listed as a cause of death for anyone in the U.K. Ella Kissi-Debrah died in 2013 after suffering severe asthma attacks for three years... When she died, the cause of her death was determined to be a severe asthma attack leading to respiratory failure. But a report compiled for Kissi-Debrah by Stephen Holgate, the former chair of the U.K. government's advisory committee on air pollution and a professor at Britain's University of Southampton, found that Ella's asthma attacks coincided with years of illegal air pollution levels on a busy street near her home".²⁴⁸ Meanwhile. Guardian correspondent Sandra Laville noted, "Until now, the statistics on air pollution deaths have been presented in black and white numbers on a page that estimate between 28,000 and 36,000 people will die as a result of toxic air pollution every year in the UK. But the life and death of nine-year-old Ella Kissi-Debrah is in full colour: from the pictures of her wearing her gymnastics leotard hung with medals, to the image of her mother and siblings holding aloft her photograph, when they no longer had her to hold on to, as they campaigned for the truth". 249 Furthermore, ecological and meteorological dimensions of climate change and global warming were evident in December media accounts. Early in December, the European Commission Copernicus Climate Change Service announced that the planet's average November 2020 temperatures were hotter than any previous November on record. This sparked media coverage. For example, CNN journalist Emma Reynolds reported, "The world just experienced its hottest November on record while Europe

248 https://www.cbsnews.com/news/air-pollution-death-uk-coroner-ella-kissi-debrah-london 249 https://www.theguardian.com/environment/2020/dec/16/ella-kissi-debrah-mother-fight-justice-air-pollution-death

December saw Cyclone Yasa – a category 5 storm – overrun the island nation of Fiji. This event drew media attention around the world.



Satellite image of Category 5 Cyclone Yasa on December 16, 2020 as it neared Fiji. Credit: CIRA/RAMMB.

had its warmest fall, according to an alarming report from the European Union's Copernicus Climate Change Service. Temperatures were most elevated in a large region across northern Europe, Siberia and the Arctic Ocean, where sea ice was at the second lowest level ever seen in November. The United States, South America, southern Africa, the Tibetan Plateau, eastern Antarctica and most of Australia also saw temperatures well above average. Globally, November was almost 0.8 degrees Celsius (33.4 Fahrenheit) above the average for 1981-2010, and 0.1C (32.2F) higher than last year. And this unusual heat comes despite the cooling effect of La Niña. In Australia, a bushfire has been burning out of control for six weeks now in the popular tourist spot of Fraser Island as parts of the country swelter through a record-breaking heatwave". 250 Meanwhile, December saw Cyclone Yasa - a category 5 storm - overrun the island nation of Fiji. This event drew media attention around the world. For example, Washington Post journalist Andrew Freedman reported, "Tropical Cyclone Yasa, currently the strongest storm on Earth, is headed for a potentially devastating landfall in Fiji within the next 24 hours. The storm is now packing sustained winds estimated at 160 miles per hour, which makes it the equivalent of a Category 5 storm. It threatens to cause damage on the

250 https://www.cnn.com/2020/12/07/weather/november-2020-hottest-month-climate-intl/index.html

A Review of Media Coverage of Climate Change and Global Warming in 2020

scale of Tropical Cyclone Winston, which caused widespread destruction when it hit in 2016... Fiji is viewed as especially vulnerable to the ravages of climate change, particularly through sea level rise and extreme weather events such as tropical cyclones. On Dec. 11, the U.N. Environment Program named him a "champion of the Earth" for his efforts to cut greenhouse gas emissions and negotiate global climate agreements. The country was the first to ratify the Paris climate accord, according to the program, and is trying to reach net zero carbon emissions by 2050".²⁵¹

In December, there were also many media stories about scientific research and findings about aspects of climate change or global warming. To begin, a large collaboration led by Lancet Countdown (and including four members of our MeCCO team) contributed to an article about climate change and public health in the Lancet Medical Journal that was published in early December²⁵². This report generated widespread media attention. For example, Sydney Morning Herald journalist Mary Ward reported, "Medical organisations say Australia is lagging behind other countries when it comes to tackling the health impacts of climate change and warn inaction is putting lives at risk. According to the MJA-Lancet Countdown report, an annual assessment of the country's progress on health outcomes related to climate change, Australians' exposure to the health effects of events such as bushfires and heatwaves is increasing".253 As another example, Guardian correspondent Natalie Grover noted, "The devastation caused by Covid-19 presents an opportunity for countries to rebuild their economies in a way that is environmentally responsible, researchers say... The 2020 report - compiled by experts from more than 35 institutions including the World Health Organization and the World Bank, and led by University College London (UCL) - teases out parallels between infectious diseases such as Covid-19 and climate change, highlighting that

251 https://www.washingtonpost.com/weather/2020/12/16/tropical-cyclone-yasa-fijicategory-5

252 http://www.thelancet-press.com/embargo/climatecountdown.pdf

253 https://www.smh.com.au/national/australia-lagging-behind-in-tackling-health-impacts-of-climate-change-report-20201202-p56jvo.html

A large collaboration led by Lancet Countdown (and including four members of our MeCCO team) contributed to an article about climate change and public



health in the Lancet Medical Journal that was published in early December.

climate change and its fossil fuel-powered drivers such as urbanisation and intensive agriculture tend to encroach upon wildlife habitats, thereby encouraging pathogens to jump from animals into humans. As the catastrophic experience of Covid-19 spurs measures to reduce the risk of future pandemics, prioritising action on the climate crisis will be critical to achieving that goal".254 Meanwhile, journalist Catherine Clifford from NBC reported, "according to The Lancet report, where people live and how much money they have directly effects their capacity to resist threats to their health from climate change".255 And, Expressen (Sweden) journalist Adam Koskelainen reported on how human's public health are impacted by changes in the climate.²⁵⁶

In mid-December, new United Nations (UN) reports on the state of planet Earth caught the attention of multiple media outlets. The UN Climate report entitled '2020 on track to be one of three warmest years on record' made news in multiple outlets around the globe. 257 For example, Washington Post journalist Andrew Freedman reported, "This year will be one of the three hottest on record for the globe, as marine heat waves swelled over 80 percent of the world's oceans, and triple-digit heat invaded Siberia, one of the planet's coldest places. These troubling indicators

254 https://www.theguardian.com/ environment/2020/dec/02/covid-pandemic-offerschance-to-act-on-climate-report-says

255 https://www.cnbc.com/2020/12/02/2020-just-a-preview-if-we-dont-fix-climate-change-the-lancet.html 256 https://www.expressen.se/nyheter/klimat/larmar-sa-paverkas-vi-av-klimatforandringarna

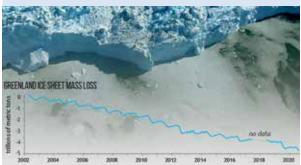
257 https://public.wmo.int/en/media/press-release/2020-track-be-one-of-three-warmest-years-record

A Review of Media Coverage of Climate Change and Global Warming in 2020

of global warming are laid out in a U.N. State of the Climate report published Wednesday. To mark the report's release and to build momentum toward new climate action under the Paris accord, U.N. Secretary General António Guterres summarized the findings in unusually stark terms. "To put it simply," he said in a speech at Columbia University, "the state of the planet is broken"".²⁵⁸

Another report - named 'Emissions Gap' - from the UN Environmental Program warned of troubling trends and emissions reductions ambitions not meeting the scale of climate change challenges. Media represented this report in several media outlets. For example, Washington Post journalists Brady Dennis, Chris Mooney and Sarah Kaplan reported, "The world's wealthy will need to reduce their carbon footprints by a factor of 30 to help put the planet on a path to curb the everworsening impacts of climate change, according to new findings published Wednesday by the United Nations Environment Program. Currently, the emissions attributable to the richest 1 percent of the global population account for more than double those of the poorest 50 percent. Shifting that balance, researchers found, will require swift and substantial lifestyle changes, including decreases in air travel, a rapid embrace of renewable energy and electric vehicles, and better public planning to encourage walking, bicycle riding and public transit. But individual choices are hardly the only key to mitigating the intensifying consequences of climate change. Wednesday's annual "emissions gap" report, which assesses the difference between the world's current path and measures needed to manage climate change, details how the world remains woefully off target in its quest to slow the Earth's warming. The drop in greenhouse gas emissions during this year's pandemic, while notable, will have almost no impact on slowing the warming that lies ahead unless humankind drastically alters its policies and behavior, the report finds. Instead, nations would need to "roughly triple" their current emissions-cutting pledges to limit the Earth's warming to "well below" 2 degrees Celsius (3.6 degrees Fahrenheit) above the

258 https://www.washingtonpost.com/ weather/2020/12/02/un-climate-report-2020warmest-year In December, the 'Arctic Report Card' – describing still-increasing temperatures, ongoing ice loss and emergent wildfire dangers – garnered significant media coverage.



Source: NOAA Climate.gov, adapted from ARC 2020.

preindustrial average – a central aim of the Paris climate agreement. To reach the loftier goal of holding warming to 1.5 degrees Celsius (2.7 degrees Fahrenheit), the report found, countries would need to increase their targets at least fivefold. That goal in particular would require rapid and profound changes in how societies travel, produce electricity and eat".²⁵⁹

Also in December, the 'Arctic Report Card' describing still-increasing temperatures, ongoing ice loss and emergent wildfire dangers - garnered significant media coverage. For example, Business Day (South Africa) journalist Yereth Rosen reported, "The Arctic region has had its second-warmest year since 1900, continuing a pattern of extreme heat, ice melt and environmental transformation at the top of the world".260 Meanwhile, Associated Press journalist Christina Larson noted, "This year's vast wildfires in far northeastern Russia were linked to broader changes in a warming Arctic, according to a report Tuesday by the National Oceanic and Atmospheric Administration. Wildfires are a natural part of many boreal ecosystems. But the extent of flames during the 2020 fire season was unprecedented in the 2001-2020 satellite record, and is consistent with the predicted 259 https://www.washingtonpost.com/climate-

environment/2020/12/09/carbon-footprints-climatechange-rich-one-percent

260 https://www.businesslive.co.za/bd/world/2020-12-09-arctic-warming-well-under-way-say-climate-scientists

A Review of Media Coverage of Climate Change and Global Warming in 2020

effects of climate change, said Alison York, a University of Alaska Fairbanks fire scientist and a contributor to the annual Arctic Report Card. The recent wildfires were exacerbated by elevated air temperatures and decreased snow cover on the ground in the Arctic region, the report found. The past year – from October 2019 to September 2020 – was the second warmest on record in the Arctic, the report said. And the extent of snow on the ground in June across the Eurasian Arctic was the lowest recorded in 54 years".²⁶¹

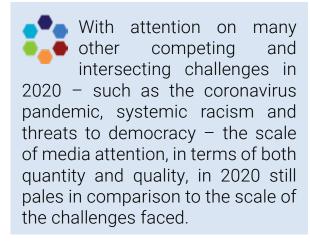
Finally, findings in Earth Systems Science Data journal that global carbon dioxide emissions reductions of 7% in 2020 (due overwhelmingly to reduced travel during the COVID-19 pandemic) were a short-term reduction as infrastructure and systems remain dependent on fossil fuels.²⁶² This paper earned widespread media accounts. For example, BBC correspondent Matt McGrath reported, "this year saw carbon emissions decline by 2.4 billion tonnes...In contrast, the fall recorded in 2009 during the global economic recession was just half a billion tonnes, while the ending of World War Two saw emissions fall by under one billion tonnes. Across Europe and the US, the drop was around 12% over the year, but some individual countries declined by more. France saw a fall of 15% and the UK went down by 13%... Researchers believe that dramatic drop experienced through the pandemic response might be hiding a longer term fall-off in carbon, more related to climate policies. The annual growth in global CO₂ emissions fell from around 3% in the early years of this century to around 0.9% in the 2010s. Much of this change was down to a move away from coal as an energy source" and "While 2020's fall of over two billion tonnes of CO2 is welcome, the scientists say that meeting the goals of the Paris Climate Agreement will need cuts of up to two billion tonnes every year for the next decade".263

With attention on many other competing and intersecting challenges in 2020 - such as the

261 https://apnews.com/article/arctic-climate-fires-oceans-wildfires-95e84c9be889a4a933c85a91a78eca64

262 https://www.earth-system-science-data.net/about/news_and_press/2020-12-11_global-carbon-budget-2020.html

263 https://www.bbc.com/news/science-environment-55261902

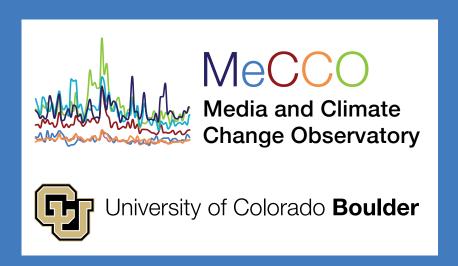


coronavirus pandemic, systemic racism and threats to democracy - the scale of media attention, in terms of both quantity and quality, in 2020 still pales in comparison to the scale of the challenges faced. Much like we did at the start of 2020, we nonetheless still look to 2021 with optimism. We at MeCCO will continue to monitor and analyze media coverage of climate change throughout the next year. So stay tuned for our monitoring, summaries and analyses in the coming months along scientific, political, economic, ecological, meteorological and cultural dimensions of climate change and global warming. Happy New Year. Onward we go.

Brought to you by your MeCCO team: Midori Aoyagi, Andrew Benham, Max Boykoff, Patrick Chandler, Meaghan Daly, Kaori Doi, Rogelio Fernández-Reyes, Anne Gammelgaard Ballantyne, Lauren Gifford, Erin Hawley Isidro Jiménez Gómez, Jennifer Katzung, Lucy McAllister, Marisa McNatt, Gabi Mocatta, Ami Nacu-Schmidt, David Oonk, Jeremiah Osborne-Gowey, Olivia Pearman, Lars Kjerfulf Petersen, Anne Hege Simonsen, and Andreas Ytterstad

Report citation:

Boykoff, M., P. Church, J. Katzung, A. Nacu-Schmidt, and O. Pearman (2021). *A Review of Media Coverage of Climate Change and Global Warming in 2020*. 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_2020.html].



Media and Climate Change Observatory
University of Colorado Boulder
http://mecco.colorado.edu