

ABSTRACT

AN ANALYSIS OF TRENDS OF PRINT MEDIA COVERAGE ON CLIMATE CHANGE IN THE TRUMP ERA

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The media plays a large role in what issues percolate with the American public and subsequently what issues are taken up in Congress as a political priority. With the election of Donald Trump as President of the United States, climate change has become one of many issues facing an uncertain political future. President Trump has acted to undo many efforts to curb climate change undertaken by the Obama Administration, including most notably the announcement of the withdrawal from the Paris Agreement and the dismantling of the Clean Power Plan. Top U.S. newspapers were examined to determine how coverage around climate change has shifted during the first year of the Trump Administration as compared to the final year of the Obama Administration, particularly looking at frequency, piece type (article, opinion, editorial), science-based content, and focus point of the news piece. Two local papers in Pittsburgh, Pennsylvania were examined to determine how coverage in smaller papers, with less resources than national papers, has changed. While national coverage remained similar, if not greater than the preceding year, the local papers observed a significant drop in coverage.

INTRODUCTION

The media undoubtedly plays a major role in what issues percolate in our collective consciousness and national conversation.¹ In the 2016 election, the media's attention to some stories, and lack of attention to others, in many ways shaped how Americans thought about political issues and candidates. Despite scientific consensus on the severity of climate change, it has often been framed as a political issue. For most adults, the media is their only source of information about environmental issues.² Media coverage of climate change influences how the public perceives the issue, and subsequently how much political action is taken to curb the impacts of climate change.

Print media often gives opportunity to do in-depth reporting and this reporting educates voters who consequently push their lawmakers towards policy change. This research explored how the frequency of climate change articles has changed since the start of the Trump Administration. One year before and one year after the inauguration was examined. As climate falls off the national political agenda, is this also reflected in print media and what implications does this have for galvanizing the public to care about climate in the future?

In the first year of the Trump Presidency there was a great deal of important national news that grabbed the public's attention—for example, immigration and the travel ban, conflict with North Korea, the Iran Deal, and the investigation into Russian involvement in the election. This left little space in the national discussion for less immediate issues such as climate change. Climate change is a slow-moving disaster and, when faced with a multitude of other pressing and immediate concerns, it is likely that this topic was not a priority for most news rooms. Examination of what impact the Trump Administration and their shifting priorities has had on the coverage of climate change in the national print media is the focus of this research.

BACKGROUND AND LITERATURE REVIEW

Obama-Era Climate Protections

The Obama Administration ushered in an era of important political attention to climate change. President Obama championed the 2015 Paris Climate Accord, an international agreement signed by 175 parties that pledged to keep the increase in global average

¹ Gary King, Benjamin Schneer, and Ariel White, "How the News Media Activate Public Expression and Influence National Agendas," *Science* 358, no. 6364 (2017): , doi:10.1126/science.aao1100.

² Engle-Friedman, Mindy, et al. *Attitudes Regarding Media Coverage of Environmental Issues and Climate Change*. 2015.

temperature to below 2°C above pre-industrial levels.³ The United States specifically pledged that the country would reduce its greenhouse gas emissions by 26 to 28 percent from 2005 levels by 2025.⁴ This was to be achieved through the Clean Power Plan, the first-ever standards for carbon emissions from power plants. Throughout his tenure, President Obama took up other issues related to climate change including a ban on arctic drilling, a moratorium on coal leasing on public lands, new fuel economy standards for passenger vehicles and trucks, improvements to energy efficiency through the Better Buildings Challenge, and regulations on methane emissions from oil and gas operations.⁵ It can be argued that President Obama's achievements in environment and climate policy are among the most impactful of his presidency.

Trump Administration Rollback

With the election of President Donald Trump and his adoption of anti-climate policies, there has been worry, among both scientists and the public, that we are causing permanent and irreversible harm to the environment and our climate. President Trump initiated many anti-environment policies during his first year in office (Fig. 1). These policy decisions were made alongside a record number of climate change related natural disasters.

³ "Paris Agreement - Climate Action - European Commission," Social Protection Statistics - Unemployment Benefits - Statistics Explained, February 16, 2017, accessed July 06, 2018, https://ec.europa.eu/clima/policies/international/negotiations/paris_en.

⁴ "FACT SHEET: U.S. Reports Its 2025 Emissions Target to the UNFCCC," The White House: President Barack Obama, March 31, 2015, accessed July 06, 2018, <https://obamawhitehouse.archives.gov/the-press-office/2015/03/31/fact-sheet-us-reports-its-2025-emissions-target-unfccc>.

⁵ "Thanks, Obama: 6 Big Climate Accomplishments From President Obama's Tenure," CleanTechnica, January 12, 2017, accessed July 06, 2018, <https://cleantechnica.com/2017/01/12/thanks-obama-6-big-climate-accomplishments-president-obamas-tenure/>.

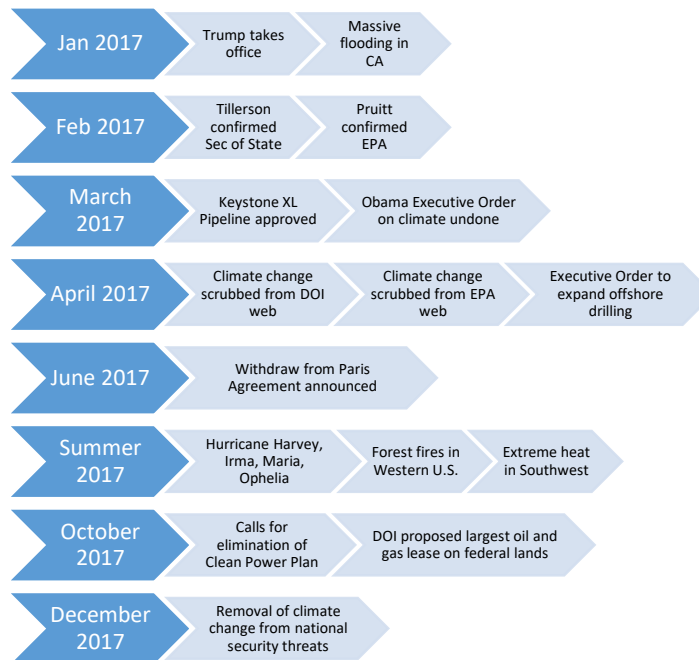


Figure 1: Major Trump Administration first year environmental rollbacks^{6,7}

In June 2017, President Trump announced his intention to withdraw the United States from the Paris Climate Accord, making the United States the only country in the world not signed onto the agreement.⁸ Additionally, the current Administration is in the process of dismantling the Clean Power Plan, the regulatory vehicle that would help the United States achieve its international climate goals. Climate policies are not a priority for the Trump Administration and this presidency will see the rollback or weakening of many Obama-era climate protections.

In addition to announcing the plan to pull out of the Paris Agreement and dismantling the Clean Power Plan, the Trump Administration has put forward many smaller attacks on climate change mitigation. Four days after entering office, President Trump issued a memorandum hastening the permitting of the controversial Dakota Access Pipeline and Keystone XL Pipeline. The Keystone Pipeline was granted permits in March of 2017.

Trump appointed Rex Tillerson, former ExxonMobil CEO, as his first Secretary of State and Scott Pruitt, former Oklahoma Attorney General, as his first Environmental Protection Agency (EPA) Administrator. As Oklahoma Attorney General, Pruitt sued the EPA fourteen

⁶ Casey Ivanovich, "A Look Back at 2017: The Year in Weather Disasters – and the Connection to Climate Change," Climate 411 Blog, January 12, 2018, accessed July 06, 2018, <http://blogs.edf.org/climate411/2018/01/03/a-look-back-at-2017-the-year-in-weather-disasters-and-the-connection-to-climate-change/>.

⁷ "A Running List of How Trump Is Changing the Environment," National Geographic.

⁸ Mythili Sampathkumar "Syria Signs Paris Climate Agreement Leaving the US as the Only Country in the World Not in It." The Independent. November 07, 2017. Accessed July 06, 2018. <https://www.independent.co.uk/news/world/middle-east/syria-paris-agreement-us-climate-change-donald-trump-world-country-accord-a8041996.html>.

times and sued the Obama Administration in opposition to the Clean Power Plan.⁹ These appointments signaled that the Trump Administration does not prioritize climate action and even would go so far as to put those in power who are ideologically in direct opposition to the agencies they are heading.

The Trump Administration also withdrew an Obama-era request for more emissions information from oil and natural gas facilities, and slashed environment, clean energy, and climate programs from the national budget with record cuts to agencies like EPA. They also removed mentions of climate change from Department of Interior (DOI), EPA, and other government websites, as well as removed climate change from the list of national security threats. The U.S. Federal Emergency Management Agency (FEMA) has removed climate change from its strategic plan, despite 2017 being the most expensive year of natural disasters in modern history.¹⁰

President Trump opened the door for offshore drilling that was closed during the Obama Presidency, opened oil and gas leasing on public lands, and opened controversial areas in the Alaska Natural Wildlife Refuge (ANWR) area for drilling. According to a report in Environmental Integrity Project, existing enforcement has lagged in 2017, with only a third of the penalties collected as compared to the same year in the Obama Administration.¹¹ Scott Pruitt's EPA rolled back the Obama-era fuel efficiency standards for cars and light-duty trucks. This was one of the biggest efforts to curb carbon emissions to date and overall would have reduced greenhouse gas emissions by six billion metric tons, more than all of the greenhouse gas emitted in the U.S. in 2016.

These rollbacks were coupled with a historic year of natural disasters. There was massive flooding in California, where the state received 25 percent of their average annual rainfall in the first 11 days of the year. 200,000 people were evacuated and there was \$1.5 billion in property and infrastructure damages.¹² In the southwest, all-time record high temperatures were recorded in Las Vegas and southern California.

Hurricane season was one of the deadliest of all time. Hurricanes Harvey, Irma, Maria, and Ophelia caused over \$300 billion in damages in the United States. An estimated 4,600 Americans died in Puerto Rico alone during Hurricane Maria.¹³ Hurricane Harvey caused

⁹ "Pruitt v. EPA: 14 Challenges of EPA Rules by the Oklahoma Attorney General," The New York Times, January 14, 2017, accessed July 06, 2018, <https://www.nytimes.com/interactive/2017/01/14/us/politics/document-Pruitt-v-EPA-a-Compilation-of-Oklahoma-14.html>.

¹⁰ "A Running List of How Trump Is Changing the Environment," National Geographic.

¹¹ Idid

¹² Casey Ivanovich, "A Look Back at 2017: The Year in Weather Disasters – and the Connection to Climate Change".

¹³ John D. Sutter and Leyla Santiago, "Hurricane Maria Death Toll May Be More than 4,600 in Puerto Rico," CNN, May 29, 2018, accessed July 06, 2018, <https://www.cnn.com/2018/05/29/us/puerto-rico-hurricane-maria-death-toll/index.html>.

record flooding in Texas and Louisiana where 27 trillion gallons of rain fell. This storm was estimated to be 15 percent more intense due to climate change.¹⁴

Barriers to Climate Change Communication

Our policies around climate change are linked to how these issues are portrayed in media. Issues that break into the collective consciousness and make headline news, evidently raise the profile of the problem for policymakers. This gives reporters and the media a critically important role in climate change communication. Research from the Center for Research on Environmental Decisions at Columbia University shows that the majority of Americans think climate change is a problem but do not think it will impact them directly or impact their life on a regular basis. Climate change is also perceived as a future problem and lacks the urgency of a more “immediate” threat.¹⁵

Additional barriers include a “finite pool of worry”. This is even more true today where the public is being bombarded with emergencies in immigration, race relations, and other pressing national issues. Research shows that people have a limited capacity for how many issues they can care about at once and tend to gravitate towards issues that are more near-term threats.¹⁶ Therefore, the public and media may forgo a climate change story in favor of, for example, more coverage on the immediate changes at the border on immigration practices.

Additionally, climate scientists communicate in different ways than the general public. Due to the nature of climate science, there never will be 100 percent confidence in climate change predictions but scientists continue to make the best possible predictions given all available data. Uncertainty stems from natural variability in climate systems and unpredictability in human behavior. This nuanced aspect of climate science translates as a more serious uncertainty with the general public. Media can play an important role in highlighting the local and pressing impacts of a changing climate and also explaining the significance of scientific levels of certainty.

How Climate Has Been Covered

Research from Boykoff and Boykoff in 2007 showed that journalistic norms have been an impediment to covering climate change.¹⁷ Their research shows that “adherence to first-order journalistic norms—personalization, dramatization, and novelty—significantly influence the employment of second-order norms—authority-order and balance—and that this has led to informationally deficient mass-media coverage of this crucial issue”.¹⁸

¹⁴ Casey Ivanovich, "A Look Back at 2017: The Year in Weather Disasters – and the Connection to Climate Change".

¹⁵ Debika Shome and Sabine Marx, "The Psychology of Climate Change Communication," Center for Research on Environmental Decisions, October 2009, http://guide.cred.columbia.edu/pdfs/CREDguide_full-res.pdf.

¹⁶ Ibid

¹⁷ Maxwell T. Boykoff and Jules M. Boykoff, "Climate Change and Journalistic Norms: A Case-study of US Mass-media Coverage," *Geoforum* 38, no. 6 (2007)

¹⁸ Ibid

Personalization refers to the “the tendency to downplay the big social, economic, or political picture in favor of the human trials, tragedies, and triumphs that sit at the surface of events”.¹⁹ In other words, the media prefers small tangible stories over broader issues; and climate change is a broad issue. Dramatization leads media to only cover climate change when there is a dramatic moment, for example, a natural disaster event. Novelty also works against climate change, as this issue has been discussed for several decades and there can be the feeling that this has already been covered and debated.

The second-order norms of authority and balance lead media to seek a spokesperson for the conflicting side of the climate change debate. The notion of balance directs media to present two scientists giving opposing positions, but neglect the fact that over 95 percent of scientists believe we are experiencing anthropogenic climate change.²⁰ Climate skeptics get an elevated platform for the sake of presenting a balanced argument. By promoting deniers views, the media “perpetuates the myth of a lack of international scientific consensus on anthropogenic climate change and thereby succeed in mainlining public confusion”.²¹

It is also well established that “right-leaning media are more likely to cite contrarian views”.²² Previous research from Painter and Ashe has found that right-leaning papers were more likely to give contrarian voices space on their commentary pages, while climate change deniers are more often quoted within journalism articles in left-leaning papers.²³ This means, in liberal leaning papers, contrarian quotes within an article are often used to debunk the point in a dismissive quotation. Commentary page coverage, however, gives more credence to the point being made.

How Climate is Covered Today

Research in 2016 from Brüggemann and Engesser showed that these journalistic trends are beginning to be less stringent.²⁴ While contrarian voices are still quoted in climate change coverage, they are not given equal platform as they were previously. Research shows that blatant climate skepticism is being replaced with subtler doubts or pushback, such as skepticism over whether binding targets will achieve anything positive.²⁵

But still problems with climate change coverage persist. There is a trend toward declining climate change coverage in the U.S. media and major media corporations have eliminated the

¹⁹ Ibid

²⁰ Sander L. Van Der Linden et al., "How to Communicate the Scientific Consensus on Climate Change: Plain Facts, Pie Charts or Metaphors?" *Climatic Change* 126, no. 1-2 (2014)

²¹ Michael Brüggemann and Sven Engesser, "Beyond False Balance: How Interpretive Journalism Shapes Media Coverage of Climate Change," *Global Environmental Change* 42 (2017)

²² Ibid

²³ James Painter and Teresa Ashe, "Cross-national Comparison of the Presence of Climate Scepticism in the Print Media in Six Countries, 2007–10," *Environmental Research Letters* 7, no. 4 (2012)

²⁴ Brüggemann and Engesser, "Beyond False Balance: How Interpretive Journalism Shapes Media Coverage of Climate Change"

²⁵ Hannah Schmid-Petri et al., "A Changing Climate of Skepticism: The Factors Shaping Climate Change Coverage in the US Press," *Public Understanding of Science* 26, no. 4 (2015)

number of environmental journalists who cover climate.²⁶ This is in favor of journalist who are general assignment reporters and can cover a greater range of issues. This research examines how these trends have played out over the last two years and if the amount of climate reporting has significantly changed.

MATERIALS AND METHODS

Data from Alliance for Audited Media was used to determine distribution size of different papers and choose which papers to examine for this project.²⁷ The top four newspapers by distribution size and availability in the LexisNexis database were: *New York Times*, *Washington Post*, *USA Today*, and the *New York Post* (Table 1).

Additionally, Pittsburgh, Pennsylvania was identified as having two papers with different political leanings to compare how climate was covered in the same geographic area. The *Pittsburgh Post-Gazette* and the *Pittsburgh Tribune-Review* are the two most popular newspapers in Pittsburgh. *The Post-Gazette* leans liberal and the *Tribune-Review* more conservative.

Table 1: Distribution Size and Location of Papers Analyzed. Data from 2016.²⁸

Paper	City	State	Distribution Size (Weekday)
USA Today	Washington	D.C.	2,140,525
New York Times	New York	NY	662,183
New York Post	New York	NY	432,501
The Washington Post	Washington	D.C.	313,974
Post-Gazette	Pittsburgh	PA	150,121
Tribune-Review	Pittsburgh	PA	65,389

When choosing these papers, papers outside the United States were excluded along with papers with no journalism component (super savers, shopping guides, etc.). Puerto Rican papers were not considered.

²⁶ David J. Park, "United States News Media and Climate Change in the Era of US President Trump," *Integrated Environmental Assessment and Management* 14, no. 2 (2018)

²⁷ "Media Intelligence Center," AAM: Total Circ for Consumer Magazines, accessed July 06, 2018, <https://abcas3.auditedmedia.com/MICenter/Home/Index?s=47869399-775a-46d0-8c08-dca9a4d28bc3#0>.

²⁸ Ibid

The LexisNexis WSK Bulk Download tool was utilized to conduct data collection.²⁹ This tool does large searches of the LexisNexis database and pulls the article information into a spreadsheet with title, data, section, and author.

The bulk download tool only searches LexisNexis, and therefore research was limited to those articles available in the LexisNexis system. Consequently, *Wall Street Journal*, *Chicago Tribune*, *Las Vegas Review-Journal*, and *Los Angeles Times* were eliminated from the research. All these papers ranked in the top 10 for distribution size.

Using the bulk download tool and the following keywords, a search was generated to obtain the batch of climate change related articles to be categorized.

Keywords: “climate change”, “global warming”, “global climate change”, “climate sensitivity”

Keywords were determined using the EPA glossary of climate change related terms.³⁰ Using the above keywords in the LexisNexis Bulk Search, the following results were obtained:

Climate change pieces January 20, 2016 – January 20, 2017:

- New York Times: 2,330
- Washington Post: 4,049
- USA Today: 192
- New York Post: 101
- Pittsburgh Post-Gazette: 255
- Pittsburgh Tribune-Review: 156

Cumulative total to be analyzed from the year before Trump election: 7,083 pieces

Climate change pieces January 20, 2017 – January 20, 2018:

- New York Times: 3,577
- Washington Post: 4,398
- USA Today: 213
- New York Post: 155
- Pittsburgh Post-Gazette: 261
- Pittsburgh Tribune-Review: 33

Cumulative total to be analyzed from the first year of Trump presidency: 8,637 pieces.

This gave a cumulative 15,720 pieces to be analyzed.

An initial reading of these search results indicated that it was necessary to manually examine each result so that articles with a low science, energy, or environment connection could be identified. For example, this search contained many articles about the celebrity Leonardo

²⁹ Scott Enderle, Penn WSK Advanced Search, , accessed August 10, 2018, <https://67.205.177.148/UpennWSK/>.

³⁰ "Glossary of Climate Change Terms," EPA, June 13, 2012, accessed July 06, 2018, <https://www3.epa.gov/climatechange/glossary.html>.

DiCaprio (i.e. “Leonardo DiCaprio, climate change activist, has won an Academy Award”). In order to better identify these less relevant pieces, articles were skimmed for content.

Once climate change articles were identified they were categorized in a spreadsheet by paper, date, and article type. Article type refers to whether the piece is journalist reporting, opinion editorial (op-ed), letter to the editor (LTE), or newspaper editorial. They were also categorized based on whether they had a science, energy, or environment focus, and if climate change was the focus or a mention in the piece.

DISCUSSION

Table 2: Comparison of Climate Change Pieces Pre and Post Trump’s Inauguration.

Total pieces refer to all articles, of any kind, that reference climate change. Focused pieces are those that have climate change as the main subject of the piece.

		Total Pieces	Focused Pieces	Articles Focused	Op-Ed Focused	LTE Focused	Editorial Focused
New York Times	2016	1,917	299	211	53	22	13
	2017	1,965	358	272	49	26	11
	Change	2.50%	19.73%	28.91%	-7.55%	18.18%	-15.38%
Washington Post	2016	2,244	486	437	15	22	12
	2017	2,417	554	439	84	17	14
	Change	7.71%	13.99%	0.46%	460%	-22.73%	16.67%
USA Today	2016	179	60	42	8	6	4

	2017	187	52	31	9	6	6
	Change	4.47%	-13.33%	-26.19%	12.50%	0%	50%
NY Post	2016	94	22	15	0	0	7
	2017	123	20	18	0	0	2
	Change	30.85%	-9.09%	20%	0%	0%	-71.43%
Pittsburgh Post-Gazette	2016	222	84	35	6	35	8
	2017	203	44	14	6	22	2
	Change	-8.56%	-47.62%	-60%	0%	-37.14%	-75%
Pittsburgh Tribune-Review	2016	90	30	13	10	11	26
	2017	32	13	13	0	0	1
	Change	-67.68%	-78.33%	0%	-100%	-100%	-96.15%

Overall, larger national papers like the *New York Times* and *Washington Post* saw a similar level or an increase in coverage, with some variance across the different categories. The two local papers examined, *Pittsburgh Post-Gazette* and *Pittsburgh Tribune-Review* both saw a large decrease in climate change coverage from 2016 to 2017 (Table 2).

There were discernable inflection points when examining the data that correlated strongly with the events outlined in Figure 1. The announcement of the plan to withdraw from the Paris Agreement and the strong hurricane season, in particular, saw a jump in coverage related to climate change.

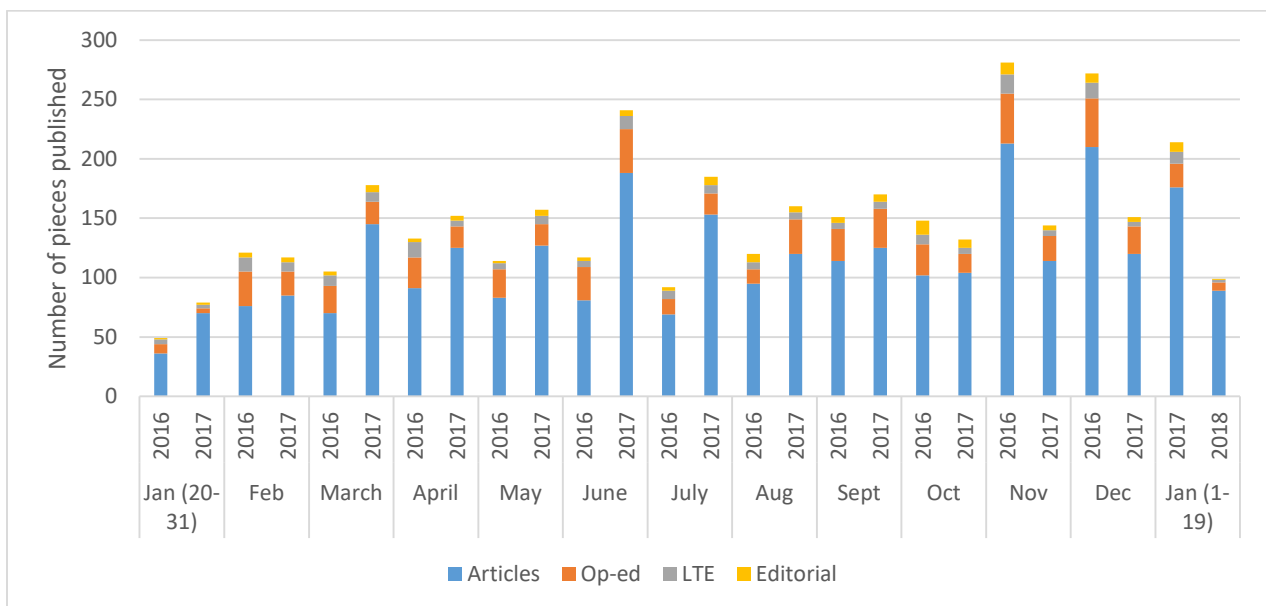


Figure 2: *New York Times* coverage of climate change, before and after the first year of Trump presidency

There was a large spike in *New York Times* climate change coverage around high profile events such as when Donald Trump won the election (November, 2016), the announcement to withdraw from the Paris Agreement (June, 2017), the approval of the Keystone XL Pipeline, and the

announcement of the undoing of the Obama Administration’s Clean Power Plan (March, 2017) (Fig. 2).

The *New York Times* had similar or increased coverage each month as compared to the month in the year prior, with the exception of the very high coverage in November and December of 2016 following President Trump’s election. While there was a high volume of pieces that mentioned climate change at this time, there was less in-depth reporting. Climate change was often mentioned once as a part of a larger political story (i.e. “Democrats are worried about issues such as immigration, climate change, and LGBTQ rights”).

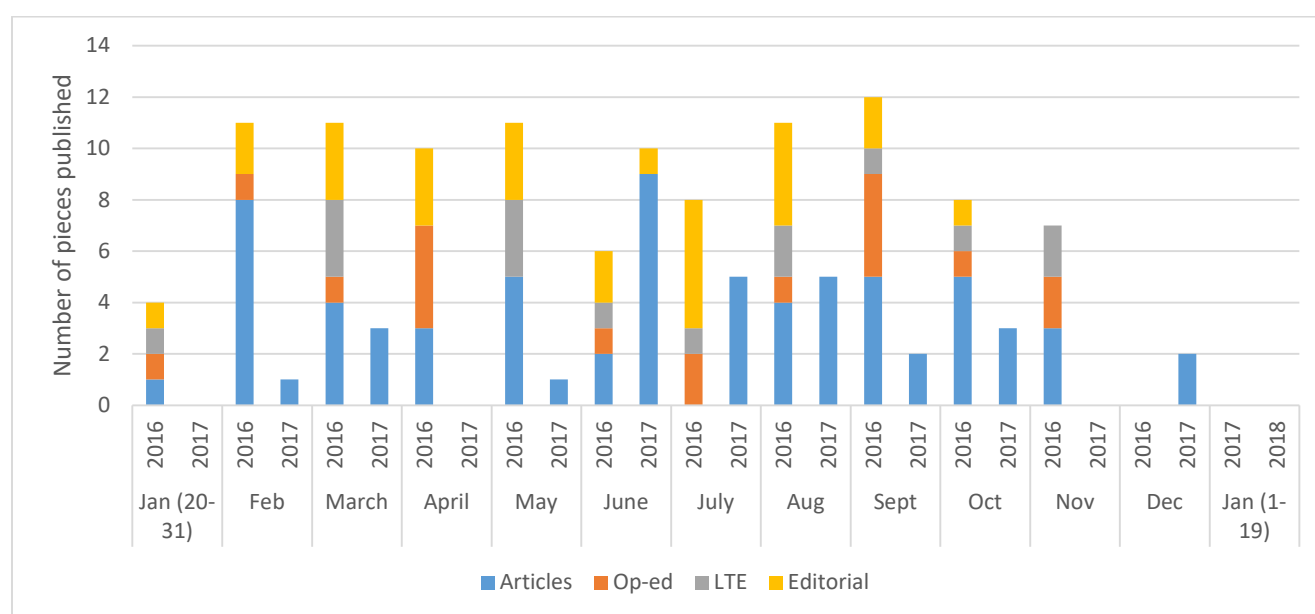


Figure 3: *Pittsburgh Tribune-Review* coverage of climate change, before and after first year of Trump presidency.

The *Pittsburgh Tribune-Review* had a steady flow of climate change coverage before the Trump Administration, averaging slightly over eight pieces per month. After the Trump Presidency, this fell to an average of two and a half per month (Fig. 3).

The only month that saw a 2017 number that was higher than 2016 was June 2017. This was because in the announcement of the withdrawal from the Paris Agreement, President Trump referenced Pittsburgh by name, saying "I was elected to represent the citizens of Pittsburgh, not Paris."³¹ This led to an increase in articles and opinion pieces on climate change in the Pittsburgh region.

³¹ Zeeshan Aleem, "Trump: I Was Elected to Represent Pittsburgh, Not Paris. Pittsburgh: Uh, We're with Paris.," Vox, June 01, 2017, , accessed April 04, 2019, <https://www.vox.com/policy-and-politics/2017/6/1/15726656/pittsburgh-mayor-trump-paris>.

Results for the *Washington Post*, *USA Today*, *New York Post*, and *Pittsburgh Post-Gazette* are found in the Appendix. They show similar trends and inflection points of coverage to those discussed above.

CONCLUSION

Despite the many pressing issues drawing our collective attention, climate change remained a large part of the coverage in most of the national papers. All national papers saw an increase in pieces covering climate change from 2016 to 2017. In particular, *The New York Times* and *Washington Post* both increased their climate change focused pieces by 19.73 percent and 13.99 percent, respectively.

Looking at local papers, the coverage was quite different. Coverage focusing on climate change decreased by 47.62 percent in the *Pittsburgh Post-Gazette* and 78.33 percent in the *Pittsburgh Tribune-Review*, comparing 2016 to 2017. While the more liberal paper, *Post-Gazette*, had more climate coverage than the conservative leaning paper, *Tribune-Review*, both saw stark decreases in their coverage.

A lack of local coverage on climate change and environmental issues can have far reaching impacts beyond a less educated public. New research shows that when there are no local papers covering environmental issues, corporations are more likely to pollute.³² Local papers in particular hold corporations accountable for environmental malfeasances.

Given that media plays a large role in spurring political action, it is important to examine if print media is still paying attention to climate change or if the issue has begun to fall off of the national consciousness. Climate change is arguably one of the greatest threats facing us today. And while it still receives coverage in national papers, climate change is not covered as thoroughly in local papers, with emphasis only on headline-grabbing events and not in-depth reporting about the slow-rolling disaster currently unfolding.

³² Pamela Campa, "Press and Leaks: Do Newspapers Reduce Toxic Emissions?" *Journal of Environmental Economics and Management* 91 (2018): , doi:10.1016/j.jeem.2018.07.007.

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APPENDIX: ADDITIONAL FIGURES

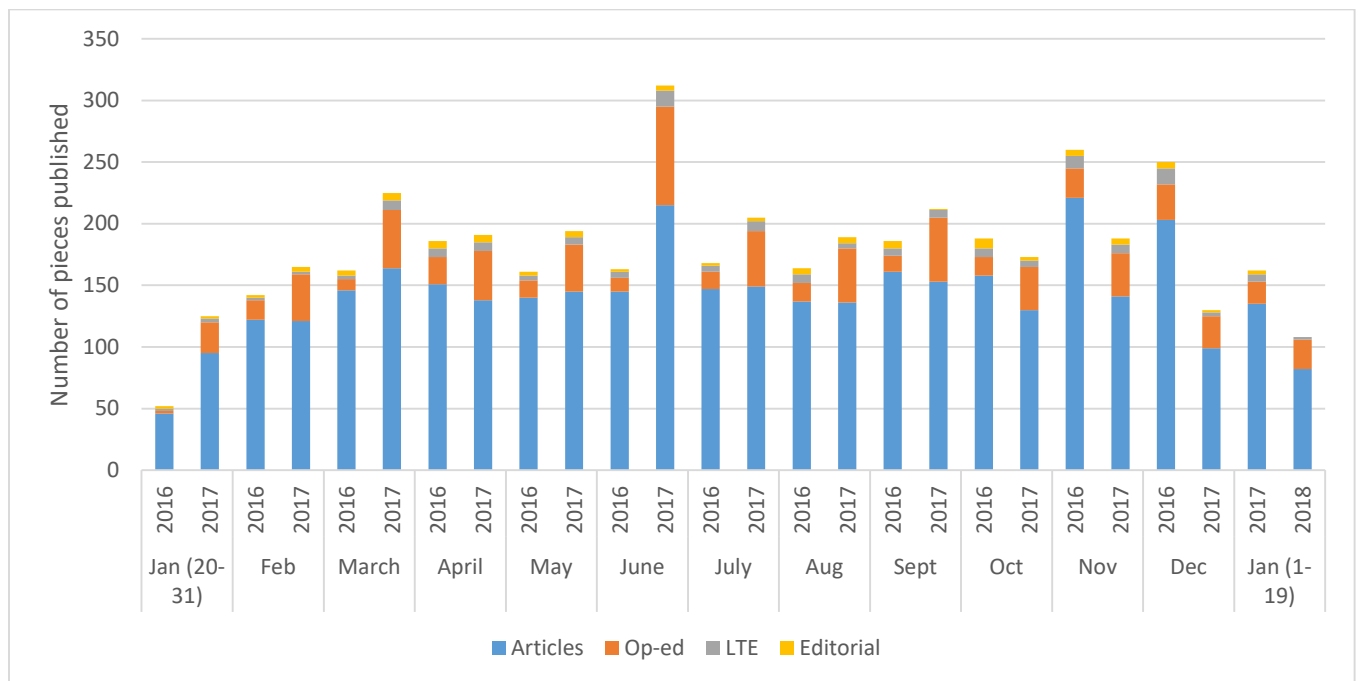


Figure 1: *Washington Post* coverage of climate change, before and after first year of Trump presidency

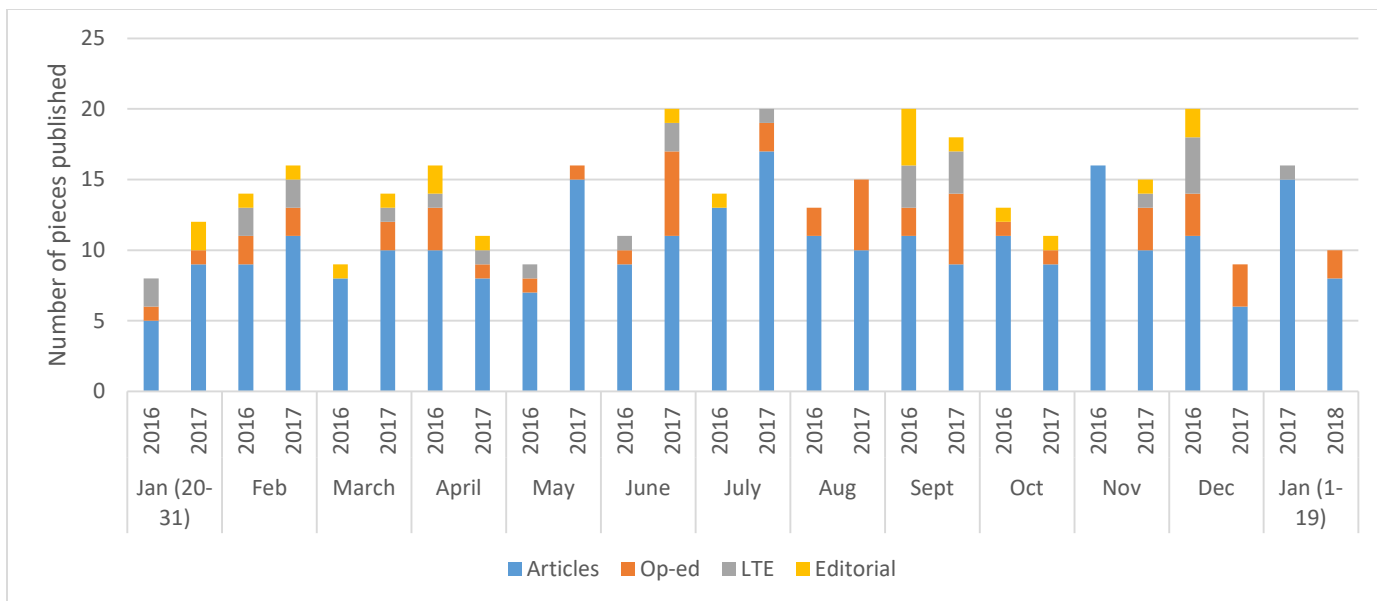


Figure 2: *USA Today* coverage of climate change, before and after first year of Trump presidency

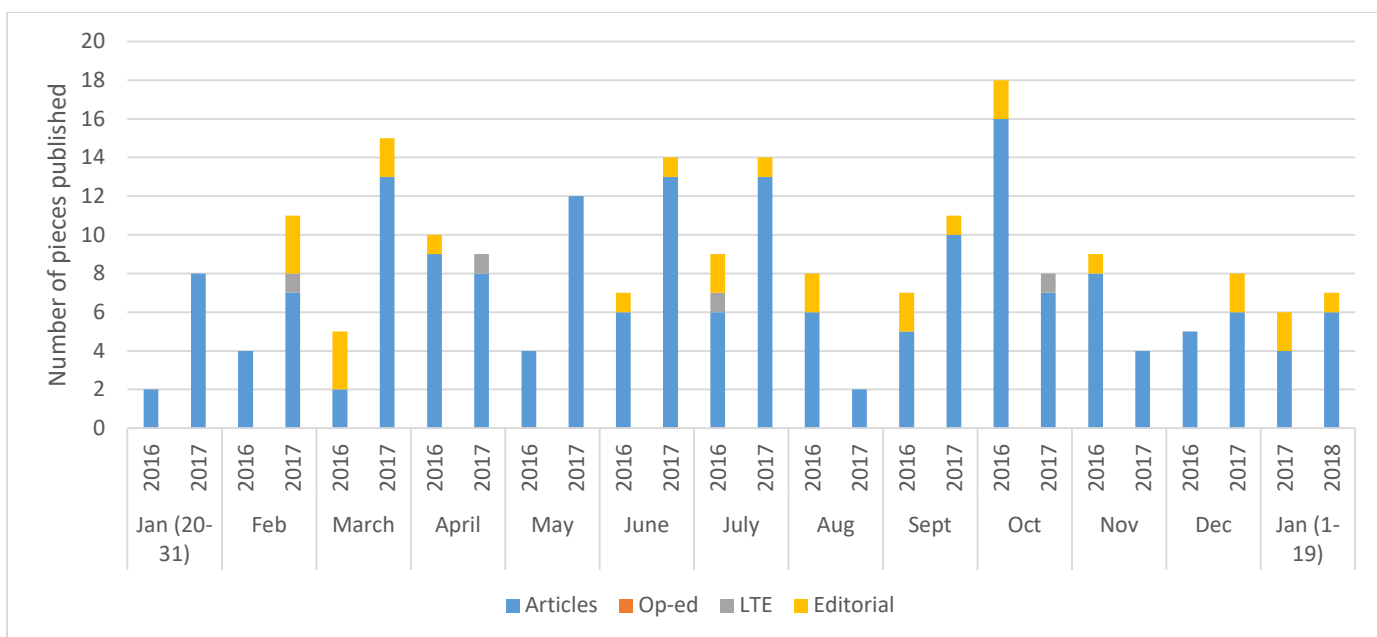


Figure 3: *New York Post* coverage of climate change, before and after first year of Trump presidency

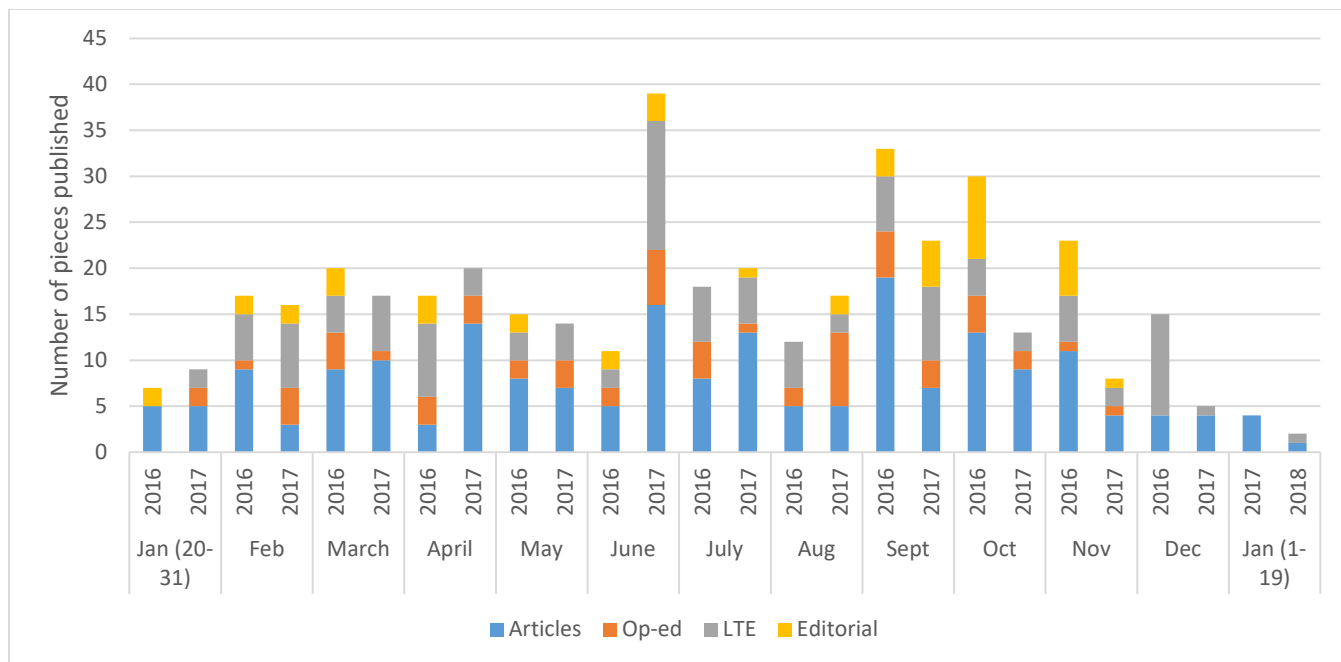


Figure 4: *Pittsburgh Post-Gazette* coverage of climate change, before and after first year of Trump presidency