THE INFORMATION PROJECT

Online Climate Information in Rhode Island

An information study on the climate change information ecosystem online in Rhode Island

By Rory Smith, Keenan Chen, Daisy Winner, Lorraine Broertjes

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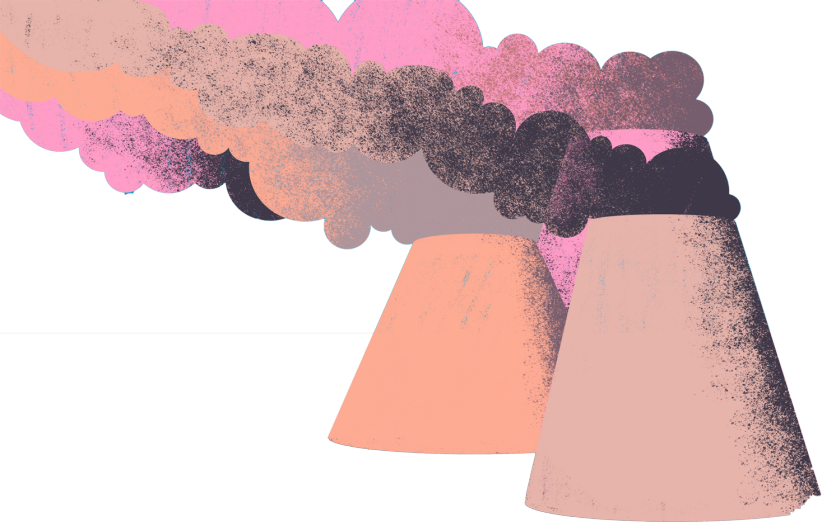


BACKGROUND

Rhode Island has been dealing with the consequences of climate change over the last decade and research predicts that the severity of the impacts will continue to increase. Rhode Island will increasingly experience hotter air and water temperatures, more extreme weather events such as droughts, intense precipitation, severe storms and flooding; increasing rates of sea level rise, shorter winters and longer summers; and less snowfall and ice coverage.

The scientific evidence demonstrating the myriad health impacts of climate change has matured rapidly in the past decade, with increasingly clear data that the consequences disproportionately harm marginalized communities.

Climate change is already affecting the health of Rhode Islanders. For example, increasing minimum, maximum and average daily temperatures in the state were associated with increasing emergency medical services utilization across Rhode Island in the summers of 2018 and 2019.

These impacts disproportionately harm economically oppressed groups and communities of color. In Providence, neighborhoods with the greatest number of BIPOC residents and the highest rates of poverty have the highest asthma and lead poisoning rates in the state, fewer trees compared to wealthier and whiter neighborhoods, and are more likely to be surrounded by polluting industries and highways.

Research also found that in Rhode Island, higher levels of neighborhood risk (based on socioeconomic measurements) were more strongly associated with pediatric asthma emergency department (ED) visits than with hospitalization rates. The risk for ED visits and hospitalizations was essentially the same in the lowest-risk neighborhoods, but the difference between the two types of visits was widest in the highest-risk neighborhoods.

Alongside this growing harm, rapid changes to our information ecosystem have undermined access to high-quality, accurate information about both the climate crisis and human health and well-being. Critical public health and science information fails to reach communities because of barriers such as psychological obstacles to engagement, well-executed disinformation campaigns, and the complexity of communicating rapidly changing evidence. The success of efforts to mitigate the effects of climate change and protect the health of communities in Rhode Island depends on the ability of government

agencies and local organizations to effectively provide high-quality information that is relevant, reliable and accessible to all.

Relevant, reliable and accessible information is central to building inclusive and equitable approaches for addressing climate change and protecting health and well-being. The goal of this project was to gain a deeper understanding of the persisting information gaps and information needs of Rhode Islanders. We hope that the research can be used by local organizations and government agencies to fill these information needs.

METHODOLOGY

Initially we looked for content and conversations related specifically to “climate change and health.” However, that approach produced almost no results. (We discuss possible explanations in the Key Findings section.)

Consequently, we broadened our approach to examine “climate change” and “health” as distinct topics. We used a list of keywords commonly associated with climate change and its impacts and solutions, including “global warming,” green energy,” “pollution” and “flooding.” Keywords related to the health impacts of climate change specifically referenced the handful of illnesses or conditions identified by scientific research, including “heatstroke” or “heat-related illness” and “asthma.” The keywords then were used to search for pertinent topics. Through a close reading of content related to these topics on social media and through news media, we extracted new keywords and iterated on this process.

We used these keywords to observe results on Google, Facebook, Twitter, Reddit and YouTube.

- We used Twitter’s Academic Research Access to collect all English-language tweets sent between June 1, 2022, and March 22, 2023, from accounts identified by Twitter as based in Rhode Island, totaling around 259,000 tweets.

- For Reddit, we first identified "r/RhodeIsland," a subreddit with over 79,000 members and devoted to the "Ocean State," as our focus. Using a customized scraper, we collected over 29,000 comments posted between Jan. 1 and March 17, 2023. [1]

- We used CrowdTangle and Tweetdeck — social media monitoring tools — to understand the spaces and conversations taking place on Facebook, Instagram, Reddit and Twitter. CrowdTangle is an analytics platform owned by Facebook that aggregates data from Reddit, Instagram and Facebook, allowing for easy monitoring of publicly available content.

- For TikTok and YouTube, we conducted general searches by inputting various keywords, such as “climate change rhode island,” into the platforms’ native search engines.

[1] Utilizing Python's NLTK toolkit, we first cleaned up the collected data by tokenizing and lemmatizing — the process of reducing a word to its root form — the unstructured data, then generated a list of popular bigrams (two adjoining words.)

KEY FINDINGS

Here are the key trends we identified surrounding the topic of climate change in Rhode Island and possible implications.

While most who live in the state believe in climate change and support policies and efforts to address it, we found two groups who are particularly vocal online — climate skeptics and opponents of climate policies.

There are still prominent voices who amplify misinformation. These include Rep. Patricia Morgan, a member of the House Environment and Natural Resources Committee and former minority leader in the Rhode Island House of Representatives, and a few incumbent public officials.

However, we also discovered climate change-skeptic weather enthusiasts and amateur meteorologists in Rhode Island and New England — the exact number of these kinds of accounts is unknown — who take to Twitter to track storms, comment on weather events and criticize people who link abnormal weather phenomena to climate change.

Wind farms off Rhode Island and the New England coast are the subject of intense debates and sometimes misleading narratives.

Rhode Island is home to the Block Island Wind Farm, the United States' first commercial offshore wind farm, which was completed in 2016. The Brown Daily Herald reported that last fall, "Gov. Dan McKee announced a request for a proposal for 600 to 1,000 megawatts of offshore wind — enough to meet 'at least 30 percent of Rhode Island's estimated 2030 electricity demand.'"

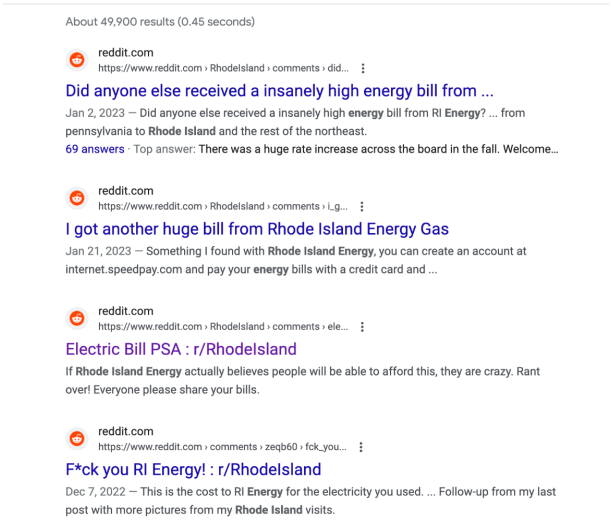
Across social media, we discovered accounts and groups dedicated to assailing wind turbines and offshore wind farms in Rhode Island and across the country, relying on a handful of erroneous claims:

- Opponents purport that offshore wind farms are linked to the "unusual mortality event" of whales up and down the Northeastern seaboard. Various communities such as climate skeptics, certain fishing interests and politicians are promoting this narrative. High-profile politicians, such as Marjorie Taylor Greene, have taken up the cause nationally, and extreme-right news outlets such as Breitbart have published pieces tying these deaths to wind farms, despite the lack of clear evidence.

- Opponents claim that wind farms will damage key fish habitats and recreational fishing, despite studies having found that the Block Island Wind Farm has actually been beneficial to fish populations and recreational fishing.

- Green Oceans, a Rhode Island nonprofit organized last December, has been vocal in its opposition to the "industrialization of the ocean." The group, made up of property owners in the East Bay — the east side of Narragansett Bay, which includes the wealthiest zip codes in the state — actively lobbies against wind power in the state, relying on disinformation techniques.

Residents are concerned, frustrated and confused about high energy and utility costs, with debates about what is driving the increases.



Rhode Islanders are facing significant financial challenges amid substantial increases in home energy costs, the result of inflation, unstable oil prices and low supplies of natural gas. We found people sharing and discussing feelings of frustration and anxiety online, as well as beliefs and opinions on what is driving the increase in cost, as seen in this Reddit thread from /r/RhodeIsland.

Opinions largely fall along political lines, with residents pointing to the energy policies of Democrats at the state and national levels, specifically blaming McKee and President Joe Biden for the rise in costs. In particular, we found that the comment sections beneath articles posted on Facebook by local news outlets, such as the Providence Journal, were a popular place for residents to share their thoughts. See examples here, here and here.

Some believe that a move toward green energy will reduce energy costs. However, others claim that green energy costs consumers more than conventional energy, and attribute the rising costs to renewable energy sources.

We found residents primarily asking questions about a handful of topics:

- Residents went online to find explanations after receiving surprisingly high utility bills. On r/RhodeIsland, users wanted to know if other people had also seen a spike in rates. Google related questions showed similar queries, including: “Did electric rates go up in RI?” This could indicate that residents weren’t adequately informed about changes in rates.
- Residents are confused about the state’s energy suppliers and the different costs associated with different kinds of energy. Specifically, some Rhode Islanders are confused about the upcoming switch to a new electricity supplier, NextEra, in seven of the state’s municipalities.
- Residents are looking for information about alternative sources of energy and what incentives or assistance the state is providing to make the switch, with questions such as: “Does Rhode Island offer free solar panels?” They are also soliciting advice from one another, asking for opinions on switching to a heat pump, for example.
- Google questions also revealed a number of people asking about how climate change will affect the state, including: “How is Rhode Island affected by climate change?” “Does Rhode Island get severe weather?” and “How far above sea level is Rhode Island?”

Residents might find it difficult to access information specifically about the health impacts of climate change.

When using search engines to look specifically for keywords for the most common health issues caused by climate change (described in the Methodology section) such as asthma, heatstroke, Lyme disease,

waterborne illnesses and other conditions as they relate to Rhode Island, there is very little content that surfaces among the top results that explicitly describes the role of climate change in exacerbating these health conditions. This also shows that residents might find it difficult to access information about climate and health that is locally relevant.

Google related questions

We explored the extent to which the Google related questions addressed climate change and environment-related keywords in relation to Rhode Island. We searched for combinations of keywords that included "rhode island" and changed our IP address to a location in Rhode Island.

The related questions returned only a few links and text that were specific to issues in the state. And despite using targeted keywords, many of the related questions were not specific to those keywords. This could mean that residents Googling questions related to climate change aren't getting information that is locally relevant.

Platform Findings

Facebook

The platform appears to be an online space where messaging from state agencies and community-based organizations (CBOs) is successfully reaching residents.

We found several instances where agencies and CBOs sharing information about utility bill assistance programs and how to apply got relatively high levels of engagement, such as the post shown from the Rhode Island Department of Human Services. It was shared 20 times. And this post from Westbay Community Action about heating assistance was shared 86 times.

RI Elder Info, a local nonprofit organization, hosted this Facebook Live session about heating assistance, which has garnered some 429 views.

We found discussions about the existence (and nonexistence) of climate change as well as the effectiveness of climate policies in the comments for news articles posted on the platform.

The relatively greater amount of Facebook activity in response to issues facing older people could reflect the large number of older adults in the state; 31.5% of the state is over age 55. Twitter
Our analysis of over 259,000 tweets found most Rhode Island-based Twitter accounts posting about "climate change" or "climate crisis" are in support of policies combating climate change.

Rhode Island elected officials, journalists, activists and other public figures dominate climate change-related conversations on Twitter. The general public, aside from various active climate skeptics, is less represented and engaged.

Reddit

From home energy-saving technologies to offshore wind farms, Rhode Islanders robustly discuss climate change-related subjects on Reddit.

Through analyzing over 29,000 Reddit comments posted between Jan. 1 and March 17, 2023 on"r/RhodeIsland," a subreddit with over 79,000 members, we found that Rhode Islanders were particularly interested in discussing heat pumps, solar panels and other home energy solutions.

For example, residents shared positive experiences about installing and using the much more environmentally friendly heat pumps. At the same time, some residents fear the construction of offshore wind farms will hurt the fishing industry. “There are seriously valid concerns about space use conflicts between offshore wind and the fishing industry (which is also very important to our state's economy),” reads a comment that was upvoted some 25 times. (Conversely, studies and professionals tell us that wind farms, when developed responsibly, provide habitat, acting in much the same way as coral reefs, attracting new and increased marine species.)

Members of this and another RI-based subreddit, “r/Providence,” frequently comment and share their experiences of weather and environmental phenomena. In one instance, a Reddit user wondered what caused the increasing “aggressive and ever present mosquitoes” in eastern Rhode Island. Several Reddit users in answers linked it to climate change. “[The mosquitoes] don't die off at the same degree and every year they’re spreading to regions they existed less frequently in,” wrote one user. “Warmer winters,” another user wrote.

YouTube

YouTube is home to a handful of civic groups and government agencies that offer a moderate amount of information on climate change, but little interaction or discussion.

A few grassroots groups have their own channels. Preserve Rhode Island expands on its traditional historic preservation efforts, using its channel to post videos of events such as a recent program on “Climate Change, Social Justice, and Local Resiliency: Land, Food, and Climate Change.” It also highlights sustainable housing efforts. The Green Energy Consumers Alliance channel focuses on its mission “to harness our power as energy consumers to speed the transition to a low-carbon future.” Among its key issues are two sets of regulations — the Advanced Clean Cars II and Advanced Clean Trucks rules — that Rhode Island must adopt to reach its 2030 greenhouse gas emissions reductions requirements.

Local news channels cover environmental stories, such as Climate Action Rhode Island’s recent action in support of scaled-back fossil fuel investment. Local news outlets also look to people such as J. Timmons Roberts, Ittleson Professor of Environmental Studies, Professor of Environment and Society and Sociology at Brown University, as a trusted source.

Sen. Sheldon Whitehouse maximizes his reach among constituents by using his YouTube channel, which has more than 30,000 subscribers, to point out climate change's effects on Rhode Island's residents, economy, coastal communities and businesses.

CONCLUSIONS

From what we observed, we found that while the health impacts of climate change pose a real threat to Rhode Island, its residents are not explicitly discussing the issue. Nor do they typically explicitly reference climate change.

Rather, they are focused on present-day challenges, especially rising utility costs. Rhode Islanders' interest in alternative power sources seems to be motivated by lowering their energy bills.

Relatedly, residents' opposition to climate solutions, including the state's wind farms, seems to be motivated by concerns about negative effects on the national and local economy. We also noticed the amplification and sharing of climate misinformation from state politicians and residents.

Together, we find that the health impact of climate change isn't a top priority for Rhode Islanders. Economic issues seem to be the most pressing, and the economy is significantly influential in residents' opinions about climate policies.

Our findings point to a number of community information needs:

1. Locally relevant information that explains the rise in utility costs.
2. Guidance around switching to alternative energy sources, including information about tax credits and discounts provided by the state.
3. Clarity on the effects of current and future wind farms on ocean wildlife and fishing (both industry and recreational).
4. Information about financial assistance for utility bills.

RECOMMENDATIONS

Here are some approaches and strategies for organizations and officials responsible for communicating climate and health information to the state:

Consider the less obvious ways that residents are confronting the challenges at the intersection of climate change and health.

For instance, the cost of heating in the winter and electricity in the summer were significant topics of conversation. While not directly related, this financial challenge facing Rhode Island residents is a climate and health issue. The prices of natural gas used to heat homes and electricity derived from fossil fuels are shaped by the non-renewable and finite nature of those sources. (Gross, 2023). And financial insecurity (driven by increasing utility costs) is a well-understood driver of poorer health outcomes (Brown & D'Angelo, 2021.)

This means that for organizations attempting to track online conversations about this issue, we recommend using keywords that best reflect the many issues related or adjacent to climate change, such as "wind," "energy costs," "electricity rates," "fishing" and "heat pumps."

Understanding the concerns of constituents through constant dialogue with relevant communities is key to this effort.

To engage Rhode Islanders about climate change and the threat it poses — particularly to their health — consider where it "fits" into the day-to-day life of residents.

Research shows that low-income individuals preferentially focus on the present as opposed to the future, and on actual situations rather than hypothetical ones (Sheehy-Skeffington, J. & Rea, J., 2017). Messaging about sea level rise might fail to engage residents for whom that impact is too far off compared to current challenges such as utility bills.

Instead, climate communications and response efforts should be designed in a way that simultaneously addresses immediate challenges and strengthens resilience to future climate impacts.

Address informational gaps and misleading narratives.

Through our analysis we discovered major gaps in reliable and relevant information. Accounts expressed confusion over different energy plans and providers, high energy costs, the potential impact of wind energy on wildlife, and how the future of Rhode Island will be affected by climate change. These areas of confusion could be addressed through the production of explanatory articles and prebunks, which could be disseminated via news outlets and through social media.

Interdisciplinary initiatives are critical to reaching Rhode Islanders.

Addressing information gaps and engaging the public about climate change and health requires the participation from a broad range of stakeholders, including government agencies, researchers, community-based organizations and local news and media outlets.

Examples include the Institute at Brown for Environment and Society (IBES) and Climate Solutions Lab, which foster research and work toward solutions as part of the conversation around environmental issues. The Public's Radio features Possibly, a podcast where reporters answer listeners' questions about climate. The nonprofit EcoRI News publishes articles about the state's climate and environment, and offers public educational events.

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