

# Analyzing Relationships to Climate Change in the Arkansas Farming Industry

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## Abstract

This paper investigates the relationship between perceptions of climate change and support for climate legislation in rural, southern communities, focusing on Arkansas. These communities are heavily reliant on agriculture and have significant stakes in environmental issues, and yet they also hold limited support for climate legislation. The study employs a mixed-methods approach, combining media analysis of leading Arkansas and agricultural newspapers along with semi-structured interviews with farmers. **Findings reveal a predominance of heavily neutral coverage of climate change in the media, potentially fostering fear and reducing hope among readers, thus diminishing support for climate legislation. The interviews with farmers underscore the tangible impacts of climate change on crop patterns and highlight varying levels of support for specific climate policies and clean energy development.** This research fills a gap in existing literature, providing crucial insights for crafting effective climate communication strategies tailored to rural, agricultural communities. By enhancing communication efforts, policymakers and advocates can better convey the urgency of climate change and garner increased support for necessary legislative measures in Arkansas and similar regions.

## Background

- The Southeastern US has historically received less public funding and federal support compared to other regions. Arkansas has ranked low in various indicators such as child well-being, family and community, economic well-being, and education
- Arkansas boasts economic diversity and large agricultural production. It leads in rice production but faces environmental challenges like water usage and methane emissions. Comprehensive climate resilience plans are lacking, hindered by political opposition.
- Climate communication is a vital aspect of environmental education, requiring careful selection of language and messaging to convey urgency and inspire action through language that utilize simplicity, repetition, and accessibility to recommended behaviors.
- By utilizing specific framing or discussing climate impacts and actions that are being taken, articles on climate change can increase hope and decrease fear in the audience, thereby increasing support for sustainable action (Feldman, Lu, Myers)



Figure 1: Physiographic Regions of Arkansas. (Division of Agriculture)

## Methods

- Climate Communication Analysis**  
Examined language and communication strategies regarding the climate crisis in Arkansas newspapers, targeting both general audiences and farmers. Aimed to understand the emotional and cognitive responses evoked and their potential impact on climate action support.
- Stakeholder Interviews**  
Conducted virtual interviews with stakeholders in Northeast AR, including farmers and representatives from agricultural organizations like the Arkansas Economic Development Commission and Riceland Foods. Transcribed interviews were analyzed using Otter ai and manual analysis for insights into perceptions of environmental issues in agricultural areas.
- Methodological Approach**  
Employed a combination of media analysis and stakeholder interviews to explore perceptions of environmental issues in Southern, Agricultural areas. Limited by time constraints, the study focused on a small number of interviews while supplementing insights with media analysis.

## Results

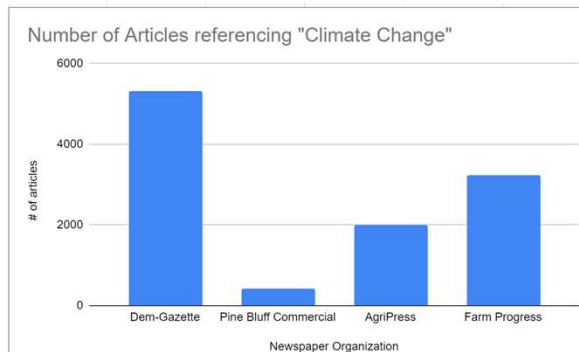


Figure 2: Number of articles referencing "Climate Change" (from all online articles for each website)

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## Media Analysis

**AR Dem-Gazette:** the articles ranged from neutral to positive. Majority of the articles supported climate change action, however many of them also only discussed the impacts or used fear as a tool to motivate the audience, which has been proven to be unsustainable.

**IBC:** a majority of the articles discussed climate change through an economic framework, which, compared to other frameworks, has been shown to not be as effective at increasing hope.

**AgriPulse:** none of the articles challenged climate science and all conveyed it as an urgent issue that needs to be addressed. Crisis was almost always framed in the context of farming. The articles did not discuss the impacts as much as the Arkansas newspapers, but rather the current actions being taken.

## Interview Analysis

Interviewed representative from Northeast division of Arkansas Economic Development Commission. Discussed developments on a very local scale, placing emphasis on serving rural communities and bringing them benefits. Did not place much emphasis on the impacts and how they're affecting communities, but did discuss actions being taken, specifically the development of wind energy being beneficial for farmers and highlighted increased funding as a positive development.

## Discussion/ Conclusion

### Media Analysis Findings

- Revealed a varied publication frequency and language framing regarding climate change, with some newspapers adopting a positive to neutral stance. Agricultural publications like AgriPulse and Farm Progress commonly addressed climate issues across articles.

### Interview Findings

- In interview with representative from ADEC, climate change was referenced through specific events (increased temps/humidity, etc) rather than referring to it as climate change impacts. Additionally, when the interviewee discussed progress on sustainability/clean energy, it was framed through economic benefits

### Limitations

- Faced challenges in obtaining interview responses, resulting in a small sample size. Limited diversity among interviewees, primarily white individuals in the 40s-60s with college education, may have contributed to bias in perspectives