

A CONTENT ANALYSIS OF NEWS COVERAGE ABOUT PRODUCED WATER: A PILOT STUDY

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THE PERMIAN BASIN OUTPUTS ROUGHLY 22 MILLION BARRELS OF PRODUCED WATER DAILY.



FRAMEWORK & METHODOLOGY

- This study applied **framing theory**
- **Quantitative content analysis** of newspaper coverage from Nexis Uni (2020–2025)
- 350 articles identified, 139 relevant, and 14 randomly selected for the pilot study.
- A codebook assessed topic, tone, quoted sources, perceived risks/benefits, and terminology used.
- Three coders trained and achieved Krippendorff's $\alpha = .88$; frequencies were calculated using SPSS.

CONCLUSIONS

- Environmental risk framing may shape perceptions of beneficial reuse as high-risk.
- Framing technological innovation as a benefit highlights a disconnect between known treatment capabilities and risk perceptions, revealing the need to address these concerns with clear science communication.

Treating and reusing produced water could unlock an additional water supply to support agriculture and natural resource management, but public understanding and acceptance is critical to adoption. The news media is a key source to disseminate information to the public.

This pilot study aimed to understand how news media portrays produced water management, and was guided by the following questions:

- 1) What is the **tone** of the news articles?
- 2) What are the prevalent **topics**?
- 3) What **sources** are used?
- 4) What are the primary **risks** and **benefits** discussed?

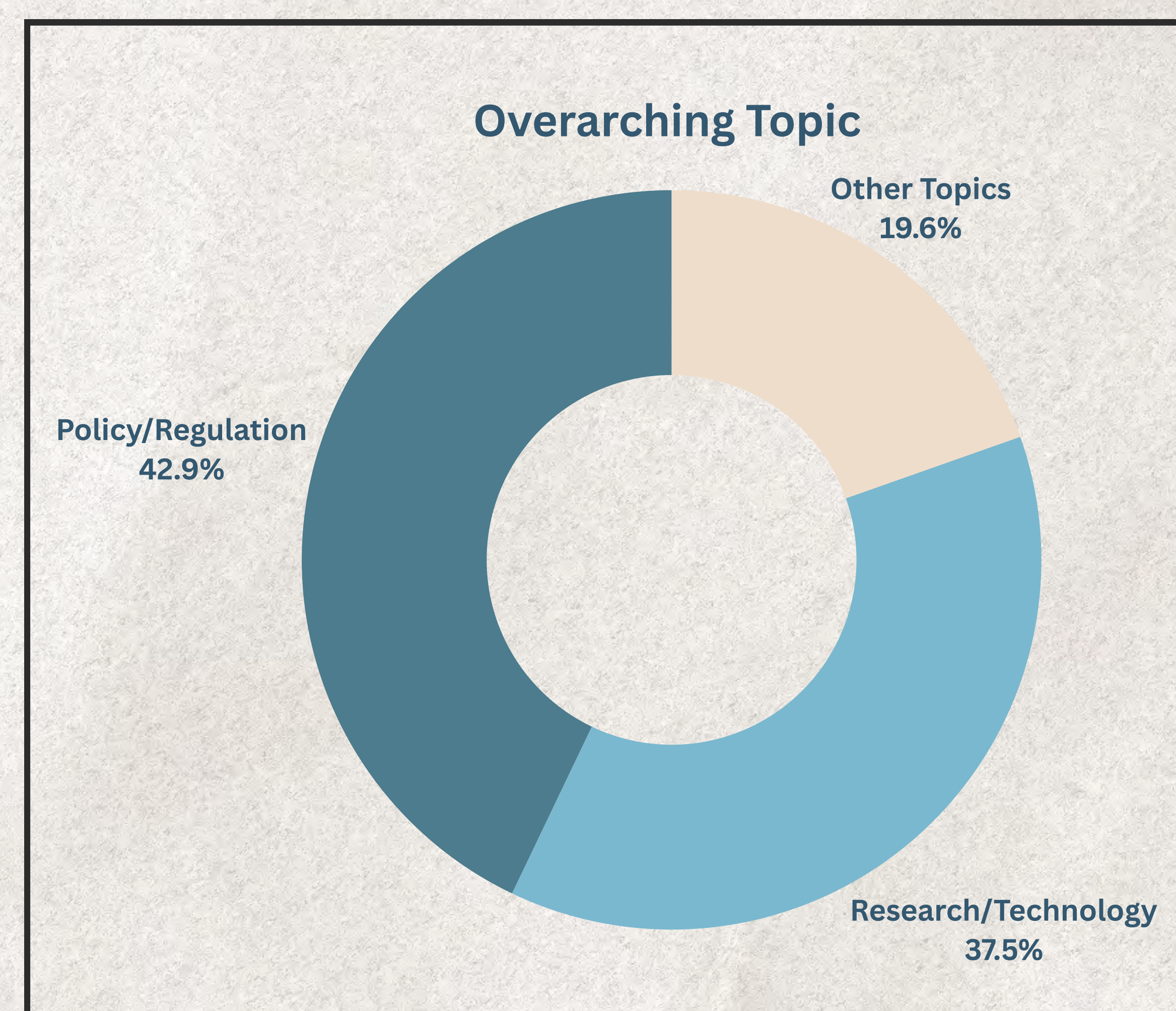
RESULTS

Tone was **evenly split between positive and negative** (35.7% each)

The dominant topics were **policy/regulation** (42.9%) and **research/technology** (37.5%)

Most quoted sources were **oil & gas, environmental, water filtration, and regulatory groups**, no articles quoted agricultural, community, or industrial water users.

Environmental risk (50%) was most common, **technological innovation** (50%) was the leading perceived benefit.



RECOMMENDATIONS

COMMUNICATIONS

Use **policymakers and independent researchers** as sources to provide more **transparency** about the permitting process, government oversight, and the safeguards in place to **protect public and environmental health**.

RESEARCH

Expand the study to the remaining identified articles and conduct additional crosstab analyses to identify patterns.
Continue examining media framing to better understand how risks and benefits of produced water reuse are communicated.