“Understanding Social Risks in CSG Brine Management”

A/Prof Kathy Witt, Amrita Kambo & Debashish Dev

Gas and Energy Transition Research Centre, The University of Queensland, St Lucia, QLD, Australia

Introduction

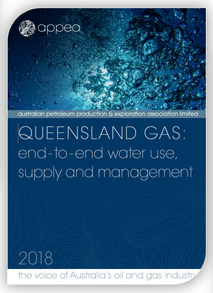
Why this project
- Queensland’s CSG industry generates large volumes of brine waste.
- Long-term management options raise community concern.
- Social acceptance is critical to viable brine solutions.

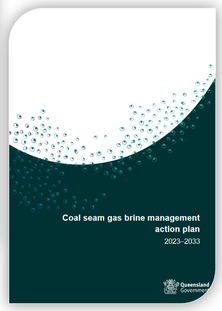
Project focus
- How communities understand brine and salt management
- Perceptions of risks, trust, and responsibility
- Conditions under which solutions may be accepted

- Project Duration: December 2023-June 2025

CSG Associated water ponds image: Phil Hayes, UQ

Brine image: Phil Hayes, UQ





Key Findings

Acceptance is Conditional

Not automatic; not uniform

- Views ranged from acceptance to rejection
- No single community position

Trust Requires Action

Words are not enough

- Strong scepticism of promises
- Visible action builds confidence

Responsibility Need to be Clear

Long-term stewardship matters

- Who owns the brine over decades?
- Concern about legacy risks

Monitoring Builds Confidence

Independence is critical

- Baselines expected before construction
- Ongoing, transparent reporting valued

SEFs Seen as Interim

Not a final solution

- Conditional acceptance only
- Expectation of continued research and reuse

Methods

Data Sources

- Media analysis (2010–2023)
- Focus groups (regional & SEQ)- 10
- Pre- and post-discussion surveys

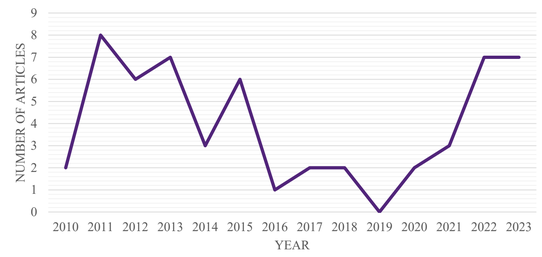
Who was involved

- Directly affected regional communities
- Broader Queensland public

Approach

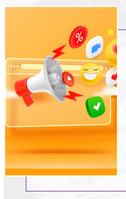
- Combined media analysis, focus groups, and surveys.
- Compared regional and broader Queensland perspectives.

Media Context



Media attention over time (based on the articles analysed in this study)

What happened in the media



Amplified local conflict and risk

Industry reassurances met scepticism

Health, land, and legacy risks prominent

Long-term control frequently questioned

What’s in the media vs What communities asked

Risk and uncertainty
Safety and reassurance
Evidence and monitoring
Gas supply continuity
Long-term responsibility
Governance and oversight
Technology performance
Legacy and intergenerational impacts

= media emphasis | = community emphasis

Key Pillars of Acceptance

Trust

What participants looked for
- Independence of monitoring
- Visibility of oversight
- Track record of compliance

Why it mattered
- Low trust amplified risk perceptions
- Reassurance without evidence was discounted

Information

What participants wanted
- Clear baseline data before development
- Ongoing, accessible reporting
- Explanation of uncertainty and limits

Why it mattered
- Information quality shaped confidence
- Gaps were interpreted as risk

Responsibility

What participants questioned
- Who holds long-term responsibility?
- What happens post-closure?
- How liabilities transfer over time

Why it mattered
- Legacy risks dominated long-term views
- Governance clarity mattered more than technology

k.witt@uq.edu.au www.gas-energy.centre.uq.edu.au.

Gas and Energy Transition Research Centre, UQ

Acknowledgments:

This project is funded by Santos, APLNG, and Arrow Energy.

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA
CREATE CHANGE

CRICOS 00025B • TEQSA PRV12080