Social research:
Western Downs and eastern Maranoa regions QLD
Dr Rod McCrea | Dr Andrea Walton | Social Scientists | 11 Dec 2018
Background to the research
Since 2012

Four main research themes:

- Community Wellbeing
- Adapting to change
- Community expectations of CSG sector
- Local attitudes perceptions towards CSG development
Investigated impacts over different industry phases

- Pre-approval
- Construction
- Operations
- Closure
Investigated impacts over different industry phases

Pre-approval

Construction

Operations

Closure
We have used a diversity of methods

Qualitative
- Interviews and small discussion groups

Quantitative
- Large shire-wide surveys (randomly selected representative samples)
What we did in the survey research – an overview

Western Downs and eastern Maranoa regions, Qld
Surat Basin survey: Feb - Mar 2014, 2016, 2018

SAMPLE: N = 400; 500; 623
100 x
- Dalby
- Chinchilla
- Miles / Wandoan
- Tara
- Roma

In town = Out of town

ABS representative
- age, gender, and employment
Telephone interview covering four topics

1. Community wellbeing
2. Resilience and adapting to change
3. Expected future community wellbeing
4. Local attitudes & perceptions of CSG development

- 180 questions
- 32 minutes
Telephone interview covering four topics

1. Community wellbeing
2. Resilience and adapting to change
3. Expected future community wellbeing
4. Local attitudes & perceptions of CSG development

SAMPLE:
2014-2016-2018

At least 100 x
- Dalby
- Chinchilla
- Miles / Wandoan
- Tara
- Roma [200 in 2018]

In town = Out of town

ABS representative
- age, gender, and employment
Scores are on a scale of 1-5

- Likert-type responses
- 1 = least to 5 = most
- Scores < 3 represent an unfavourable view
- Average scores
Community wellbeing

RESULTS
Measuring CWB: 15 dimensions in six domains

- **Social**: Personal safety, local trust, community spirit, community cohesion, community participation, social interaction
- **Health**: Physical and mental health
- **Economic**: Income sufficiency, employment and business opportunities
- **Physical infrastructure**: Services and facilities, roads, built environment
- **Environmental**: Environmental quality and environmental management
- **Political**: Local decision making and citizen voice
Overall Community Wellbeing: 2014-2016-2018

Western Downs 2014: 3.82
Western Downs 2016: 3.82
Western Downs 2018: 3.75
Overall Community Wellbeing: 2014-2016-2018

Perception scores

- Western Downs 2014: 3.82
- Western Downs 2016: 3.82
- Western Downs 2018: 3.75
- Eastern Maranoa 2018: 3.96
### Community Wellbeing WD: 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>2018 Score</th>
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<tbody>
<tr>
<td>Community spirit</td>
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<td>Personal safety</td>
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<td>Environmental quality</td>
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<td>Community participation</td>
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<td>Roads</td>
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<td>Community spirit</td>
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## Community Wellbeing WD: 2014 - 2016 - 2018

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<td>Overall community wellbeing</td>
<td>5</td>
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</tbody>
</table>
Only five dimensions changed significantly 2014 – 2016 – 2018

- Environmental quality
- Environmental management
- Roads
- Local decision making
- Economic opportunities

Perception scores

2014: purple, 2016: green, 2018: blue
Only five dimensions changed significantly 2014 – 2016 – 2018

Perception scores

- Environmental quality
- Environmental management
- Roads
- Local decision making
- Economic opportunities

2014 2016 2018
Sub-regions: Tara perceives its community wellbeing as lower
Compared to people who live in town, people who live out of town feel community wellbeing is lower.
Demographic differences

Age
● Older residents experience higher community wellbeing
  - Rate services and facilities as higher

Income
● Lower income residents report lower community wellbeing in 7/15 dimensions

Gender
● Compared to men, women reported
  - Less satisfaction with personal safety, services and facilities, and environmental quality
  - More satisfaction with social interaction and higher community spirit
The community as a ‘great place to live’ is high except for teenagers

Overall, I am happy living in this local area
Overall, this local area offers a good quality of life
This community is suitable for seniors
This community is suitable for teenagers *
This community is suitable for young children

Perception scores
The community as a ‘great place to live’ is high except for teenagers

Overall, I am happy living in this local area

Overall, this local area offers a good quality of life

This community is suitable for seniors

This community is suitable for teenagers *

This community is suitable for young children

Perception scores
Important drivers of community wellbeing consistent over time

Top three drivers

• Community spirit, cohesion, and local trust
• Services and facilities
• Community participation, and social interaction

• Personal safety / Environmental loading / Economic opportunities
Resilience and adapting to change

RESULTS
Community resilience actions important for adapting to change

Resilience

**Strategic actions**
Planning, leadership, accessing and using information, learning

**Working together**
Sharing resources, information, learnings; good working relationships, collective efficacy

**Community commitment**
Perseverance, supporting volunteers, committed to the future, getting involved

**Citizen voice**
Local decision making processes, being heard, being involved, trust in leaders
Perceptions of adapting to CSG not shifting

Western Downs

Adapting to change

GISERA
Gas Industry Social and Environmental Research Alliance
More positive perceptions of adapting to CSG in eastern Maranoa

The chart shows the percentage of participants in Western Downs 2018 and eastern Maranoa 2018 categorized by their perceptions of adapting to change:

- **Community resisting it**: Low percentage in both regions.
- **Community not coping**: Moderate percentage in both regions.
- **Community only just coping**: Higher percentage in eastern Maranoa.
- **Community adapting to the change**: Higher percentage in eastern Maranoa.
- **Community changing into something different but better**: Low percentage in both regions.
Smaller subregions feel coping and adapting less than larger centres

Coping and adapting to CSG activities - 2016
Coping and adapting to CSG activities - 2018

Perceptions of coping and adapting

Dalby: 3.03, 3.13
Chinchilla: 3.12, 3.07
Miles-Wandoan: 2.75, 2.73
Tara: 3.15, 2.86
Eastern Maranoa: 3.28, 3.29
## 2018: What matters to adaptive communities

<table>
<thead>
<tr>
<th>Region</th>
<th>Perceived adapting score</th>
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<tbody>
<tr>
<td>Dalby</td>
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<tr>
<td>Chinchilla</td>
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<td>Miles</td>
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<tr>
<td>Tara</td>
<td>2.91</td>
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<tr>
<td>WD region</td>
<td>3.03</td>
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<tr>
<td>Roma</td>
<td>3.35</td>
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</tbody>
</table>

- Local planning
- Leadership
- Information access
- Working together
- Community commitment
- Local decision making
  - Being listened to
  - Having a say
  - Trust in local leaders
- Economic opportunities
- Environmental management
Perceptions of resilience actions modest

- Overall satisfaction with community responses to...
- COMMUNITY COMMITMENT
  - The community supports its volunteers
  - The community perseveres to find solutions
- WORKING TOGETHER
  - All groups can work together to take advantage of CSG...
  - All groups can work together to address problems...
  - There are key people to help get things done
- ACTING STRATEGICALLY
  - There is sufficient access to relevant information
  - There is adequate leadership to deal with the changes
  - There is good planning for future changes

Perception scores

<table>
<thead>
<tr>
<th>Perception</th>
<th>EM 2018</th>
<th>WD 2018</th>
</tr>
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35
Expected future community wellbeing

RESULTS
Expectations of future community wellbeing slightly more optimistic in 2018 than 2016

Western Downs: Expected community wellbeing

- Decline
- Stay about the same
- Improve

Percentage of participants

<table>
<thead>
<tr>
<th>Year</th>
<th>Decline</th>
<th>Stay about the same</th>
<th>Improve</th>
</tr>
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<tbody>
<tr>
<td>2016</td>
<td>30%</td>
<td>56%</td>
<td>14%</td>
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<tr>
<td>2018</td>
<td>21%</td>
<td>57%</td>
<td>21%</td>
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</table>
How does this all fit together

Dimensions of Community wellbeing

Overall community wellbeing

Expected Future community wellbeing

Community resilient actions

Overall community adaptation

Social acceptance of CSG

Summary of changes – WD region

Overall community wellbeing
Expected future wellbeing
Overall community resilience
Place attachment
Community attitudes and feelings towards CSG

Perception scores

Western Downs 2014
Western Downs 2016
Western Downs 2018
Summary of changes – WD region and Roma

Overall community wellbeing
Expected future wellbeing
Overall community resilience
Place attachment
Community attitudes and feelings towards CSG

Perception scores

Western Downs 2014
Western Downs 2016
Western Downs 2018
Eastern Maranoa 2018
Key messages – Community wellbeing

- Communities maintained their wellbeing over three different industry phases
- The main drivers of community wellbeing were consistent over time
  - Ensure services and facilities maintained and enhanced
  - Social wellbeing is as important – personal safety, community spirit, social interaction
- Perceptions of community wellbeing were consistently lower over time for people who live out of town
- Expectations of future community wellbeing have become more optimistic in 2018
Observations – Community resilience to CSG

- Community perceptions of coping and adapting to CSG remained static for WD region
  - Perceptions of resilience actions to CSG development remained modest over time
  - Economic opportunities and environmental management act as indicators of how well the community is adapting
  - Processes for ensuring people feel listened to and heard, and ways to share information important
- Adapting to CSG development is different from community wellbeing
- Size of town seems to matter in perceptions of adapting to CSG development
- Age of the industry seems to affect perceptions of adapting
Local attitudes towards CSG development

RESULTS
CSG Attitudes – slightly more positive in 2018

Note: Percentages rounded to the nearest whole percent
2018: Attitudes toward CSG – still vary across the region

Local attitudes

- Dalby
- Chinchilla
- Miles-Wandoan
- Tara

Percentage of participants

Reject | Tolerate | Accept | Approve | Embrace

- Dalby
- Chinchilla
- Miles-Wandoan
- Tara
2018: Attitudes toward CSG – still vary across the region

Percentage of participants

- Dalby
- Chinchilla
- Miles-Wandoan
- Tara
- eastern Maranoa

Local attitudes
A general softening of negative emotions over the four years in the WD

Types of feelings

<table>
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<tr>
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<th>2014</th>
<th>2016</th>
<th>2018</th>
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<td>Optimistic</td>
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<tr>
<td>Angry</td>
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<tr>
<td>Worried</td>
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</table>
A general softening of negative emotions over the four years in the WD
2018: CSG Attitudes – Out-of-town residents still less positive

<table>
<thead>
<tr>
<th></th>
<th>In town</th>
<th>Out of town</th>
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<tbody>
<tr>
<td>Reject</td>
<td>6%</td>
<td>13%</td>
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<tr>
<td>Tolerate</td>
<td>39%</td>
<td>29%</td>
</tr>
<tr>
<td>Accept</td>
<td>30%</td>
<td>31%</td>
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<tr>
<td>Approve</td>
<td>24%</td>
<td>9%</td>
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<tr>
<td>Embrace</td>
<td>11%</td>
<td>9%</td>
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</table>
Farmers with active leases no differences in wellbeing compared to farmers without

- **Decision making - CSG companies involve local residents in their decisions**
- **Levels of trust - CSG companies in your local area can be trusted**
- **Attitudes and feelings toward CSG**

![Bar chart comparing farmers with active leases and other farmers on decision making, levels of trust, and attitudes and feelings toward CSG.]
Farmers with active leases more positive in 2018 than 2016

Satisfaction with dealings with CSG companies

Attitudes and feelings toward CSG

Farmers with active CSG leases: 2016 - 2018
Suggested improvements from farmers with active leases, 2018

- Improve the relationship quality with the farmer: 52%
- Improve things related to compensation agreements: 20%
- Reduce impacts on farming operations: 16%
- No recommendations: 11%

Percentage of comments
Comparison: QLD 2018 and Narrabri 2017

- **Reject it**: 30% (Narrabri), 9% (Western Downs), 7% (Eastern Maranoa)
- **Tolerate it**: 27% (Narrabri), 34% (Western Downs), 21% (Eastern Maranoa)
- **Be OK with it**: 15% (Narrabri), 31% (Western Downs), 15% (Eastern Maranoa)
- **Approve of it**: 13% (Narrabri), 16% (Western Downs), 23% (Eastern Maranoa)
- **Embrace it**: 15% (Narrabri), 10% (Western Downs), 12% (Eastern Maranoa)
Eight groups of factors influencing attitudes and feelings toward CSG development

- Relational aspects - industry and community
- Trust in Industry
- Relationship quality
- Procedural fairness
- Perceived impacts
- Perceived benefits
- Distributional fairness
- Governance
- Knowledge

SOCIAL ACCEPTANCE

Industry effects
Factors important to acceptance of CSG development

1. PERCEIVED IMPACTS
2. PERCEIVED BENEFITS
3. DISTRIBUTIONAL FAIRNESS
4. TRUST IN CSG COMPANIES
5. QUALITY OF RELATIONSHIPS
6. PROCEDURAL FAIRNESS
7. GOVERNANCE
8. KNOWLEDGE CONFIDENCE

OVERALL COMMUNITY ACCEPTANCE...
Size of town matters in the way impacts and local benefits perceived

Perceptions of impacts

Perceptions of benefits

Future issues | Current impacts
--- | ---
Dalby | Chinchilla | Miles-Wandoan | Tara | EM region

Note: Scores: 1 = Not at all concerned and 5 = very concerned; the higher the score the greater the level of concern

Societal benefits | Local benefits
--- | ---
Dalby | Chinchilla | Miles-Wandoan | Tara | EM region

Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions
Demographic differences

Age
• Younger adults more positive about CSG development
  – Perceive less impacts and more benefits
  – Distribution fairness to be higher
  – Much more confidence in and trust in governance

Gender
• Compared to men, women reported
  – Much less confident in their knowledge about CSG
Tara: lowest level of knowledge confidence about CSG

Note: The higher the score the greater the confidence in knowledge and the greater the need for information
Tara: lowest level of knowledge confidence about CSG; highest need for more information

Note: The higher the score the greater the confidence in knowledge and the greater the need for information.
Half the community indicating a need for more information

Percentage of participants

- 1 = need very little
- 2
- 3
- 4
- 5 = need a lot more

Western Downs region
eastern Maranoa

Need for more information
Risks to groundwater still seen as not manageable, not understood by science, and not understood by community

- Risks are potentially catastrophic
- Risks are manageable
- Risks are understood by science
- Risks are understood by the community

Agreement scores:
- Western Downs region
- Eastern Maranoa region

Note: 1 = does not agree, 5 = Strongly agrees
Modelling social acceptance, or lack of:

- **Procedural fairness** → **Relationship quality** → **Trust in industry**

- **Perceived impacts** → **Perceived benefits**

- **Levels of social acceptance**
  - **Perceived impacts**
  - **Perceived benefits**
  - **Water risk perceptions**
  - **Knowledge and risk perception**
  - **Perceived impacts**
  - **Perceived benefits**

- **Governance**
  - **Distributional fairness**
Modelling social acceptance, or lack of:

- Trust in industry
- Perceived impacts
- Water risk perceptions
- Perceived benefits
- Knowledge and risk perception
- Distributional fairness

Levels of social acceptance

**GISERA**
Gas Industry Social and Environmental Research Alliance
Modelling social acceptance, or lack of:

- Procedural fairness
- Relationship quality
- Trust in industry

Levels of social acceptance:
- Perceived impacts
- Perceived benefits
- Water risk perceptions

Distributional fairness

Knowledge and risk perception
Modelling social acceptance, or lack of:
Modelling social acceptance, or lack of:
Modelling social acceptance, or lack of: with data
Modelling social acceptance, or lack of: with data
Modelling social acceptance, or lack of: with data

![Diagram showing the relationships between different variables related to social acceptance and risk perceptions.](image)
Modelling social acceptance, or lack of: with data

Procedural fairness → Relationship quality → Trust in industry

Perceived impacts: -.14
Perceived benefits: .19

Trust in industry → Levels of social acceptance

Perceived impacts: -.30
Perceived benefits: .17

Water risk perceptions: -.11
Knowledge and risk perception: .07

Perceived impacts: -.14
Perceived benefits: .29

Governance

Perceived impacts: .34
Perceived benefits: .41

Distributional fairness

Perceived impacts: .13
Perceived benefits: .18

Distributional fairness → Levels of social acceptance

Perceived impacts: -.14
Perceived benefits: .29

Knowledge and risk perception

Water risk perceptions
Opportunities to improve the things that matter to communities

Note: Size of bubble indicates relative importance of that driver; height of bubble indicates perception score of the driver (y axis); bubbles below the red line indicate an unfavourable perception of that driver except for perceived impacts where a higher score indicates greater concerns.
Key messages - Attitudes and perceptions of CSG

- A range of views towards CSG development continue and with a similar pattern
- Attitudes not polarised
- Feelings had softened
- Water remains the main concern about CSG development
- Local and societal benefits from CSG development were both seen as modest
- Size of towns matter in the way local benefits and impacts are perceived
- More favourable perceptions towards CSG development in the eastern Maranoa than the Western Downs
- Landowner relationship with gas is ongoing
  - Needs continual work to maintain and improve
Key messages - Attitudes and perceptions of CSG

- Level of social acceptance in local communities depends on perceptions about:
  - Industry effects: *perceived impacts* and *benefits*
  - Relations between community and CSG operator: *procedural fairness*; *relationship quality*; and *trust in industry*
  - *Distributional fairness* in terms of how benefits and costs are shared
  - *Governance* of the industry: compliance, regulations, planning and trust in governing bodies
  - *Risk to underground water*: beliefs about the manageability of the risk and the severity of the outcome
  - *Confidence of knowledge* about CSG combined with beliefs about risks to underground water

Opportunities for building trust and increasing acceptance exist by improving these key drivers
Thank you

RESEARCHERS
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Dr Bruce Taylor

Economic projects
Dr Tom Measham
Dr David Fleming
Dr Paul Graham
Dr Yiyong Cai
Dr Raymundo Marcos-Martinez


Open discussion
Extra
Three groups of attitudes to depict the model: WD and EM
Three groups of attitudes to depict the model: WD and EM

Perceived impacts
- Water risk severe
- Water risk manageable

Perceived benefits
- Informal governance
- Formal governance

Trust in state governing bodies
- Trust in CSG companies

Knowledge confidence
- Procedural fairness
- Distributional fairness

Relationship quality
- Trust in state governing bodies

Reject  Lukewarm  Support