

Trends in community wellbeing and local attitudes to coal seam gas development, 2014 -2016 -2018

Western Downs and eastern Maranoa regions,
Queensland

Survey report

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Executive Summary

Using the 2018 CSIRO Community Wellbeing and Responding to Change survey, this research documents changes and trends in community wellbeing, resilience and local attitudes to CSG development over time and across different industry phases. It shows changes between the construction, post-construction and operations phases of development in 2014, 2016, and 2018 respectively, and how attitudes and perceptions of the CSG sector vary across the region.

What we did

In March-April 2018, using a comprehensive telephone survey of 623 residents from the Western Downs and the eastern half of the Maranoa local government areas, we measured community wellbeing and resilience, and local attitudes and perceptions of CSG development within these regions. The report compares 2018 results with previous surveys conducted in 2014 and 2016, and identifies how these aspects have changed in the Western Downs over time. The eastern Maranoa is used as a comparison region.

Where

The 2018 survey covered the Western Downs and eastern Maranoa regions in southern QLD. The communities in these regions are part of the most intensive gas extraction in the Surat Basin gasfields, which contained almost 10,250 wells (producing, suspended, capped) at the time of data collection in 2018.

When

The 2018 survey was conducted over a six week period during March – April 2018.

- Similar surveys were conducted in February / March 2014 and 2016 for the Western Downs region with the eastern Maranoa first added as a comparison region in 2016.
- In 2014 the industry was completing its construction phase building major infrastructure necessary for operating the industry such as pipelines for gathering and transporting the gas, power lines, compressor stations, water treatment facilities, and gas processing facilities. This infrastructure was scattered through the Western Downs and Maranoa regions and required an extensive labour force to construct. It provided major economic activity to the regions.
- In 2016 the industry was in its post-construction phase with most major infrastructure completed and the region experiencing an economic slowdown.
- In 2018 the industry was in a more stable operations phase with production gas wells underway and new gas fields opening up in the region.

Who

Participants were randomly selected using lists of landline and mobile phone numbers. Quotas were used to obtain a representative sample based on age, gender, employment status, and location characteristics according to the Australian Bureau of Statistics (ABS).

- The sample comprised four subregions in the Western Downs: Dalby and surrounds, Chinchilla and surrounds, Miles/Wandoan and surrounds, Tara and surrounds; plus Roma and surrounds in eastern Maranoa
- The survey took approximately 30 minutes to complete. The response rate in 2018 was 26%, which is considered very good for telephone surveys of this length.

A general comment about describing the results

We typically report the results as average scores out of 5 using a scale from 1 to 5 where 1 is the least and 5 is the most. A score below the midpoint of 3 is considered lower or unfavourable on average. Where relevant, we describe results as statistically important or significant at the $p < .05$ level. This means that there was less than a five percent chance that the findings were due to chance.

COMMUNITY WELLBEING

Measures of community wellbeing reflect perceptions about whether the community is a great place to live and whether it offers a great quality of life for all ages. As such, it differs from individual wellbeing. Fifteen dimensions of community wellbeing were evaluated using 73 questions encompassing social, environmental, political, economic, health, and physical infrastructure aspects of the community. When assessing community wellbeing, future community wellbeing, and place attachment, there was no direct reference to CSG development in these survey questions.

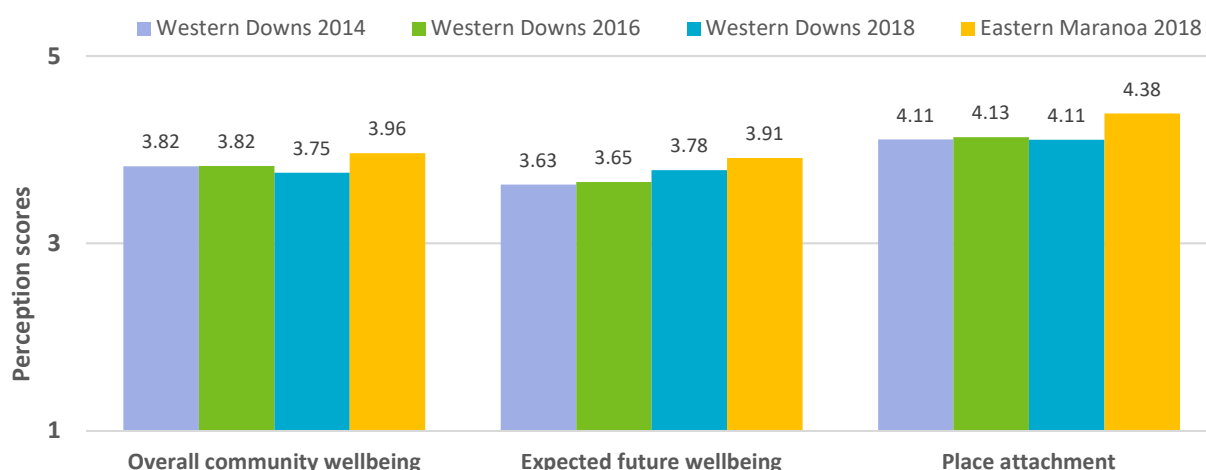
What we found: Community wellbeing

Over the three data collection periods 2014-2016-2018 the following key results were identified:

- The Western Downs region maintained robust levels of wellbeing within their communities, with little change in the overall community wellbeing scores, even though some dimensions of community wellbeing showed changes over time.
- Since 2014 in the Western Downs, five of the fifteen dimensions showed statistically significant changes while the other ten dimensions remained fairly constant.
 - *Environmental quality, environmental management, and roads* showed gradual but ongoing improvement from 2014
 - *Local decision making processes* showed a gradual negative change over the four year period
 - *Employment and business opportunities* showed the greatest change demonstrating a large drop from 2014 to 2016 in the post-construction phase, with some improvement in 2018 in the operations phase
- In each round of data collection we asked about expectations of future community wellbeing in three years hence. In 2018 expectations of future community wellbeing was higher than previous survey periods.
 - Over half of people's expectations of the future could be explained by their perceptions of current levels of community wellbeing and how well they believed the community was responding and adapting to CSG development
 - Attitudes towards CSG development were only important in explaining people's expectations about the future during the construction phase in 2014
- Place attachment remained high during all industry phases.
- The eastern Maranoa region also demonstrated robust levels of community wellbeing. These levels were statistically higher than the Western Downs region.

Figure 1 shows changes in some of the key measures over 2014, 2016, and 2018 for the Western Downs Region. The 2018 scores for the eastern Maranoa are shown as a comparison.

Figure 1 Mean scores of overall community wellbeing, expected future community wellbeing and place attachment: Western Downs region 2014-2016-2018 and eastern Maranoa 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores > 3 indicate favourable perceptions, scores < 3 indicate unfavourable perceptions

- The underlying drivers of community wellbeing were consistent over time. Table 1 shows the top three groups of drivers being similar across the three different industry cycles. These included:
 - The level of *services and facilities* – for example schools, child care, medical and health services, sports and leisure facilities, community support services, food and other shopping
 - The level of *community spirit* and *community cohesion* – for example inclusiveness and friendliness within the community, welcoming of newcomers and people with differences, and working together and supporting each other
 - The level of *social interaction* – for example visiting, talking to, and going out with others in the community
- Local trust became statistically important in 2018, while perceived personal safety was statistically important in earlier years
- Economic opportunities and environmental management were more important for community resilience than a sense of community wellbeing.

Table 1 Important drivers of community wellbeing (ranked): Western Downs region 2014-2016-2018

2014 Construction phase	2016 Post-construction	2018 Operations phase
Services and facilities	Services and facilities	Community cohesion
Community spirit	Community spirit	Services and facilities
Community cohesion	Personal safety	Local trust
Social interaction	Social interaction	Social interaction
Personal safety	Town appearance	Roads
Town appearance	Community cohesion	Community spirit

Key messages: Community Wellbeing

- 1. A robust level of community wellbeing was maintained over periods of changing economic activity, even though some aspects of community wellbeing decreased during certain industry phases and other aspects improved.**
 - Despite the economic ups and downs of the construction phase, post-construction phase, and operations phase there were no statistically significant changes in overall community wellbeing in the Western Downs between 2014 and 2018.
- 2. Social capital, services, and facilities maintained community wellbeing over time**
 - The consistently important drivers of community wellbeing over the period were *social aspects* (community cohesion, trust, social interaction), and the level of *services and facilities*
- 3. The important drivers of community wellbeing indicate areas for focussing programs and initiatives to help maintain and strengthen community wellbeing**
 - Even if social capital, services, and facilities are presently good, it is important to maintain them over time to maintain community wellbeing.
- 4. Five of the fifteen community wellbeing dimensions showed statistically significant changes over time, which corresponded to industry phases, while the other ten dimensions remained fairly constant, along with place attachment**
 - *Environmental quality, environmental management, and roads* were at the lowest level during the construction phase and showed gradual but ongoing improvement from 2014
 - *Local decision making processes* showed a gradual negative change over the four year period. Local decision making processes were less important to community wellbeing, but critical for community resilience and adapting to CSG development
 - *Employment and business opportunities* showed the greatest change, demonstrating a large drop from 2014 to 2016 and an improvement in 2018. Employment and business opportunities were more important as an indicator of resilience and adaptation to CSG development, than to perceptions of overall community wellbeing.
- 5. Perceptions of community wellbeing were consistently lower over time for people who live out of town than those who live in town**
 - Although community wellbeing levels for people who live out of town were still very robust, findings suggest that easier access to services and facilities, and more opportunities to engage socially would enhance community wellbeing for people who live out of town.
- 6. Expectations of future community wellbeing were more optimistic in 2018 than in 2016**
 - Expectations about the future wellbeing of the community improved in the Western Downs during the operations phase in 2018.
 - When people viewed community wellbeing and community resilience to CSG development as strong, they then held more positive views about the future wellbeing of their community.
 - The stronger a sense of belonging and attachment to place the more positive a person was likely to feel about their community's future.

COMMUNITY RESILIENCE AND RESPONDING TO CSG DEVELOPMENT

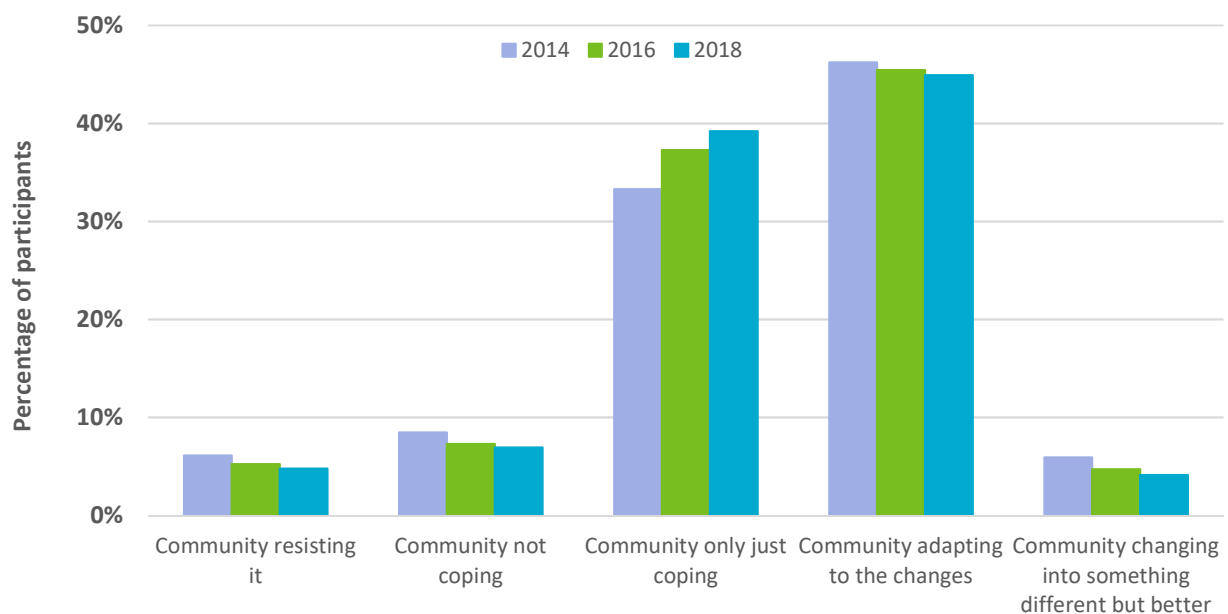
Coal seam gas development in a region has the potential for creating both opportunities and challenges for its communities from social, economic, and environmental perspectives. Community resilience actions, local decision making processes, and trust in local leaders are important for helping a community adapt well to changes.

What we found: Community resilience and adapting

There was a diversity of views regarding how well people felt their community was adapting to CSG development, which reflected perceptions of resilience and adaptation

- As in previous surveys, approximately half the participants indicated they felt their communities were responding and coping well to the changes, while the other half indicated their communities were either just coping, not coping, or resisting (see Figure 2).
- In 2018, the smaller town centres of Miles and Tara identified their communities as not responding well to CSG development on average. Miles had the most unfavourable perceptions of community coping and adapting, though Tara also dropped to unfavourable levels in 2018.
- In contrast, levels of community resilience and adapting were significantly higher and positive on average in the eastern Maranoa region.
- Most communities within the Western Downs reported no real shift in how well they felt their community was responding to changes from CSG development.

Figure 2 Perceptions of community adapting to CSG development over time: Western Downs 2014 – 2016 - 2018



Note: The red arrow indicates a line between less and more favourable perceptions of community adapting

Analyses identified important aspects of community wellbeing and resilience that were consistently linked to positive views of community adaptation to CSG development. These act as *indicators of adapting and coping well* with CSG. People judge how well their community is adapting to CSG development based on the following:

- ✓ Good *economic opportunities*, such as businesses doing well and good employment options
- ✓ Good *environmental management* for the future, such as underground water and farming land
- ✓ Effective *local decision making processes* and strong citizen voice, such as people having trust in local leaders and council, feeling listened to and heard, and being kept informed
- ✓ Good *sharing of information* and *working together* on problems and opportunities
- ✓ Good *strategic planning, leadership, and access to information*
- ✓ Good *community commitment*, involvement, and perseverance
- ✓ Strong *local trust, community cohesion, and community spirit*
- ✓ Good *environmental quality* - low levels of dust and noise, and good air quality

Income sufficiency was an important indicator in 2014 when construction was in full swing and 2016 when there was significant economic slowdown. Services and facilities were an important indicator during the operations phase, and roads during the construction phase.

Key messages: Community resilience and adapting

1. Perceived community resilience actions to CSG development were only modest and did not change over time

- Perceptions of strategic planning and being able to work together were only modest, although community commitment was generally positive.

2. Perceptions of community coping and adapting also stayed static

- There was no improvement in perceived community adaptation to CSG development over time in the Western Downs
- Smaller town centres in the Western Downs tended to perceive their communities as coping and adapting to CSG development less well than residents from larger towns
- In contrast, levels of community resilience and adapting were significantly higher and positive on average in the eastern Maranoa region.

3. Adapting to CSG development is different from community wellbeing

- Adapting well is about economic aspects and environmental management, proactive planning and sharing of information, being kept informed and having a say, and the community persevering and working together to address challenges and opportunities
- Community wellbeing is more about maintaining high levels of services and facilities and social capital

4. The indicators of community adaptation provide opportunities for where things could be improved to increase people's confidence in adapting well to change

- When people judge the indicators as functioning at high levels (e.g. economic opportunities etc.) they are more confident that their community is adapting well to CSG development

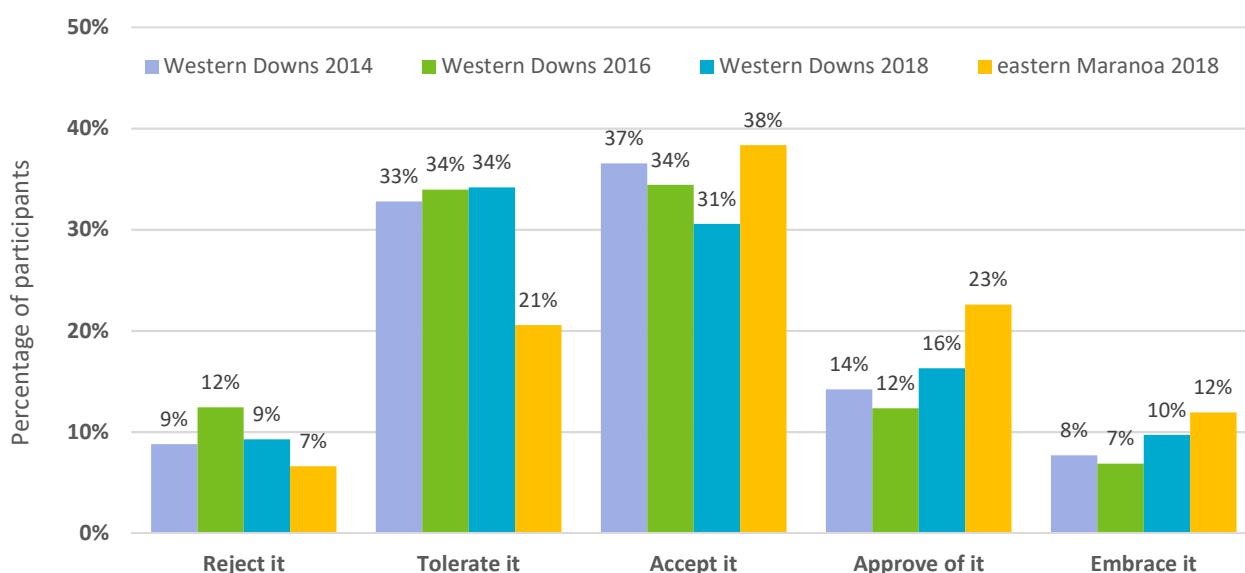
- The smaller town centres reported lower levels of these indicators and subsequent lower perceptions of adapting well to CSG development. If these aspects improved it is expected the smaller communities would judge their adaptation to CSG development far more positively

LOCAL ATTITUDES AND PERCEPTIONS OF CSG DEVELOPMENT

What we found: Local attitudes towards CSG development

- In 2018, attitudes towards CSG development within the Western Downs region still ranged across a spectrum of views.
 - 9% of people rejected CSG development
 - 10% of people embraced CSG development
 - 81% of people tolerated, accepted, or approved of CSG development
 - 34% tolerated
 - 31% accepted
 - 16% approved
- This pattern has remained similar over time, as shown in Figure 3.
 - In 2016, there was a slight shift towards more negative views, but in 2018 this trend reversed and attitudes were slightly more positive.
- In 2018, the eastern Maranoa held more favourable attitudes towards CSG development

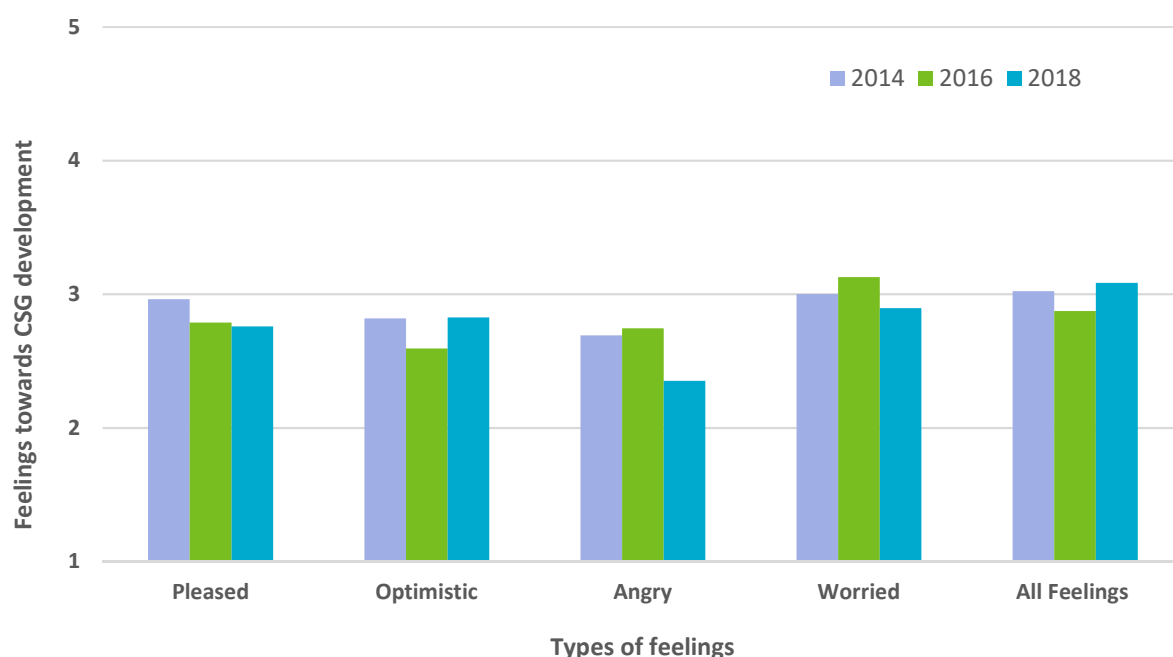
Figure 3 Attitudes towards CSG development: Western Downs 2014-2016-2018 and eastern Maranoa 2018



Note: Percentages rounded to the nearest whole percent

- In 2018, people's views towards CSG development continued to differ between towns in the Western downs region.
 - Chinchilla held the most positive views towards CSG development in 2014, 2016, and 2018
- In 2018, there continued to be differences in attitudes towards CSG development between people who lived in town and people who lived out of town:
 - People who lived in town showed statistically more positive views over 2014-2016-2018
 - People in towns were slightly less favourable in their attitudes towards CSG development in 2016 than they were in 2014, though returning to more favourable attitudes again in 2018, whereas
 - People who lived out of town showed no real change over time.
- Trends over the four years showed a general softening of negative emotions towards CSG development in the Western Downs, as shown in Figure 4.
 - A sense of worry had lowered since 2016 ($M = 3.13$) to a score in 2018 ($M = 2.90$) of not being worried on average.
 - People were not angry on average in any of the industry phases, and even less so in 2018 ($M = 2.35$) compared to previous years.
 - Feelings of optimism about CSG development were at their lowest in 2016 ($M = 2.59$) and returning to 2014 levels in 2018 ($M = 2.83$).
 - People in the eastern Maranoa indicated more positive feelings towards CSG development than the Western Downs.

Figure 4 Trends in feelings toward CSG development: Western Downs region, 2014, 2016, and 2018



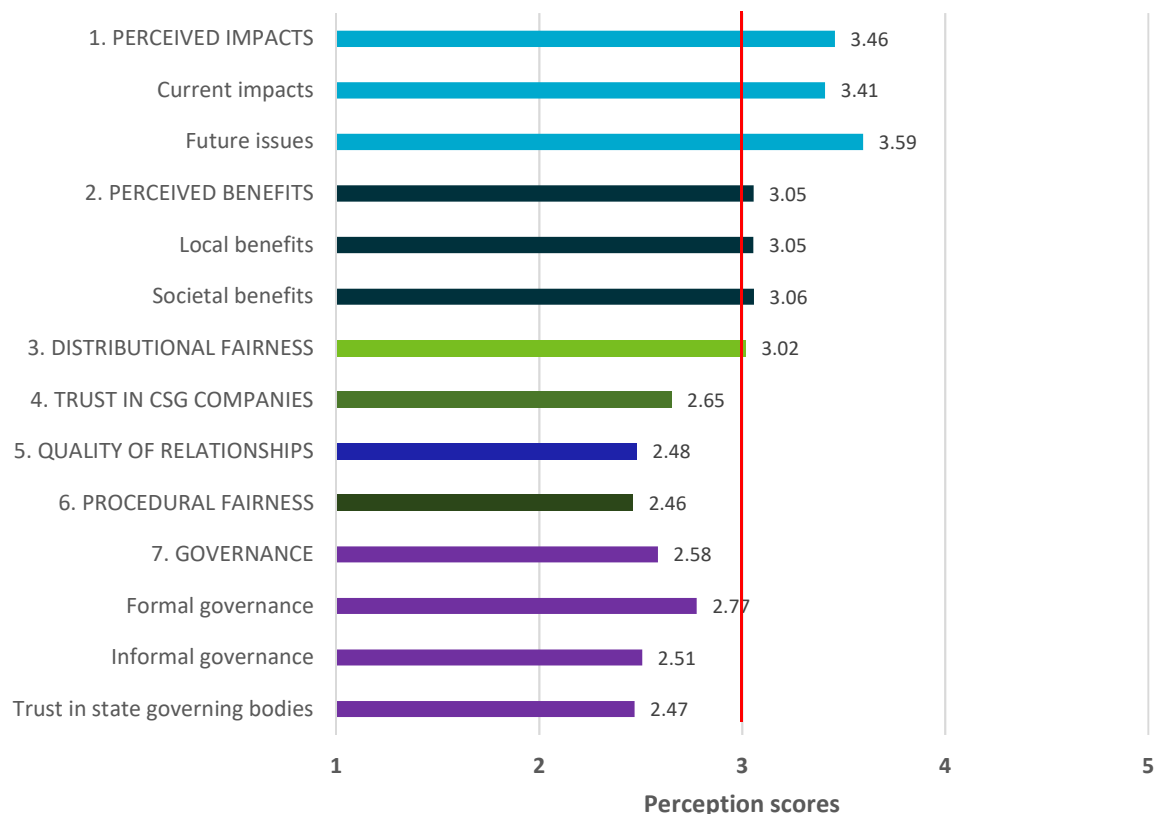
Note: 1 = strongly disagrees with the feeling towards CSG development (worried, angry, optimistic, pleased), 5 = strongly agrees with the feeling

What we found: Perceptions of CSG development

For the first time in 2018, the survey measured perceptions of nine different factors previously identified as important to forming an overall view about CSG development. These included perceptions of *impacts* and *benefits*, *procedural* and *distributional fairness*, *governance*, *quality of relationships with industry*, *trust in the industry*, *perceptions of water risk*, and *knowledge*. Results are shown in Figure 5.

- Concerns for impacts from future issues were moderately high and greater than perceptions of current impacts
- Perceptions of benefits were marginal across the region, although this varied between sub-regions
- On average, perceptions of procedural fairness, trust in CSG companies, and the relationship quality with the CSG company were generally negative
- Perceptions of distributional fairness in terms of how costs and benefits were shared was seen as marginal
- Perceptions of governance were also unfavourable
 - However, people indicated more positive perceptions of governing bodies to regulate the industry and hold CSG companies to account (formal governance) than other aspects such as trust in governing bodies. These perceptions also varied according to the subregion.
- Perceptions of risk to underground water were moderate, though lower in the eastern Maranoa than in the Western Downs.
 - Perceived risks to ground water were driven more by high perceptions of the severity of the risk than low perceptions of manageability of the risk. However, both were still important.
- People's confidence in knowledge about the industry were at modest levels with more than half indicating they needed more information

Figure 5 Perceptions of underlying factors important to acceptance of CSG development: Western Downs, 2018

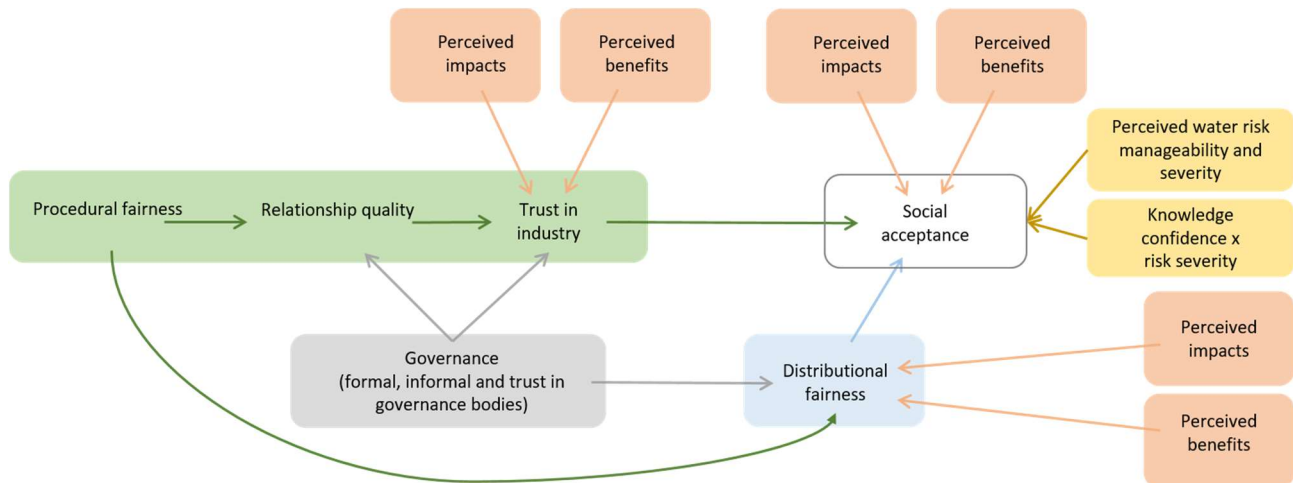


Note: Scores: 1 = lowest and 5 = highest perception; scores > 3 indicate favourable perceptions; scores < 3 indicate unfavourable perceptions, except for perceived impacts where higher scores indicate more concern. Lower case factors of the same colour are sub-components.

A model of trust and social acceptance

Statistical modelling of the nine key factors showed how the different factors can work together to best explain trust and levels of acceptance, as shown in Figure 6. The model shows opportunities for building trust and increasing acceptance by improving the key drivers that influence and shape trust and acceptance.

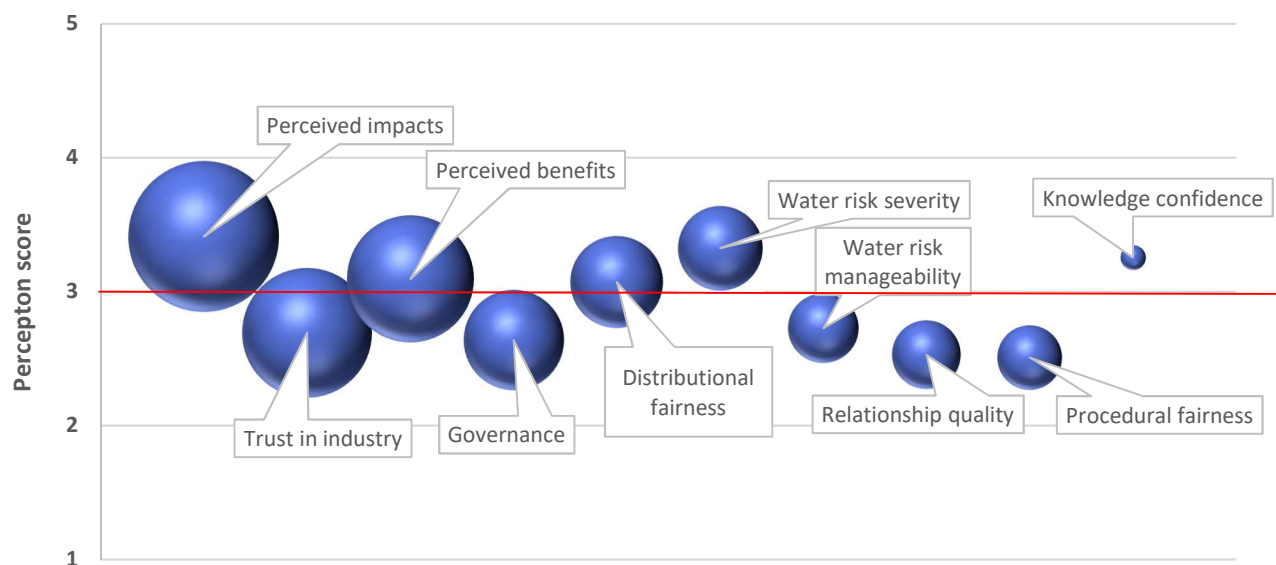
Figure 6 Model of trust and social acceptance or lack thereof



Note: The impact of knowledge confidence depends on a person's beliefs about water risk severity

- The model demonstrates that people's trust and acceptance of the industry is dependent on a range of factors.
 - Moreover, each factor needs to be addressed and improved if people's trust in industry and acceptance of CSG development in their communities is to improve.
- Figure 7 shows the most important drivers of social acceptance by the size of the bubbles.
 - Perceived impacts, trust in industry, perceived benefits, governance and distributional fairness are the five most important drivers.

Figure 7 Total effects of the different drivers on levels of social acceptance



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: Local attitudes and perceptions of CSG development

1. Over the four year period a range of views remain towards CSG development, and the pattern of views has remained similar

- In 2018 people did not report strong feelings towards CSG development on average and the strength of their feelings had softened over the four year period.
- Attitudes towards CSG were not polarised in the Western Downs and eastern Maranoa. Rather the range of attitudes in both regions demonstrated a relatively normal distribution with most views in the mid-range.
- Younger people held much more positive views towards CSG development though are still concerned about potential impacts. They perceive more benefits, better distributional fairness, and have much more confidence in governance surrounding the CSG industry.
- In 2018, eastern Maranoa held more favourable views towards CSG than the Western Downs

2. Main concerns about CSG development remain about water

- Concerns of local residents about underground water resources and perceived uncertainty about the science remain high.
- This reflects the level of importance that underground water resources represent to rural communities and the complexity of the underlying science, combined with issues of trust in the CSG industry and state government regulating bodies.

3. Local and societal benefits from CSG development were both seen as modest

4. Size of towns matters in the way local benefits and impacts are perceived

- The smaller towns tended to have a negative view as to the local benefits of CSG development and perceived impacts as more of a concern than the larger town centres.

5. Previous connection with the industry is linked to lower levels of concern about impacts

6. More positive attitudes and perceptions about CSG development were evident in the eastern Maranoa than the Western Downs

7. Levels of social acceptance in local communities depend on people's 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

1 Introduction

1.1 Background to the survey research

Since 2014, our research team has monitored community wellbeing, resilience, and attitudes towards coal seam gas development in the Western Downs region QLD using representative samples. This has entailed bi-annual comprehensive telephone interviews of residents of the region randomly selected to provide their perceptions of community wellbeing in their local communities and how they perceive their communities are responding to changes associated with CSG development. In addition, the residents have reported their perceptions of and attitudes towards the industry and the related sector. The interviews were undertaken in 2014, 2016, and 2018 using the same survey tool with slight modifications over the years, and additional questions on perceptions about the industry were added in 2018 to better understand factors underlying different levels of social acceptance of CSG development in the region. The survey results are representative of the region in terms of age, gender, and employment status according to the ABS, 2016. In 2016 and 2018, the research extended to also include the eastern part of the Maranoa shire as a comparison region, referred hereafter in the report as the eastern Maranoa, which includes Roma and surrounds.

Creating initial baseline measures in 2014 and collecting bi-annual data over subsequent years has allowed this research to monitor social impacts associated with coal seam gas development over time as it progresses through various phases of the industry's life cycle. In 2014, the industry was still in its construction phase building significant infrastructure estimated to be over \$60 billion AUD for the extraction and distribution of CSG as part of Queensland's recently established CSG-LNG industry. In 2016, the economic activity slowed considerably as the industry transitioned from its construction to operations phase: the slowdown also exacerbated by low global commodity prices for gas. In 2018, the industry was in its operations phase with over 1,000 wells producing CSG in the Western Downs and Eastern Maranoa regions and new gas fields opening up in the area including over 300 new CSG wells proposed to be drilled. The data collected from these three different time points provide rich information as to how residents from the region believe their communities have responded to the impacts of CSG development. This report documents these changes over that time period.

The findings presented in this report represent a unique data set of social perceptions about a major new industry as it unfolds in an agricultural region. It provides important information for decision makers in communities, government, and industry charged with addressing issues of concerns to host communities, and helping to realise potential benefits from an industry such as CSG.

PROJECT SCHEDULE FOR 2018 SURVEY

Project Phase	Activity	Status
Phase 1	Preparation, data collection	Completed: Feb - April 2018 Region-wide survey conducted
Phase 2	Data analysis and report writing	Completed: May - July 2018 Report: <i>Trends in community wellbeing and local attitudes to coal seam gas development: Western Downs and eastern Maranoa: Survey report, 2018.</i>
Phase 3	Feedback sessions with stakeholders	Aug – Dec 2018: Interpret findings, develop key messages for communications

Phase 4	Disseminating findings	Jan – Mar 2019: Communicate results including interactive website; scientific paper
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OVERALL PROJECT AIMS

1. To monitor changes and trends in community wellbeing, resilience, and local attitudes to CSG development across different industry phases, and how these vary between the construction, post-construction, and operations phases of development.
2. To communicate key messages and lessons learned from this program of community wellbeing research, which has been ongoing since 2012.

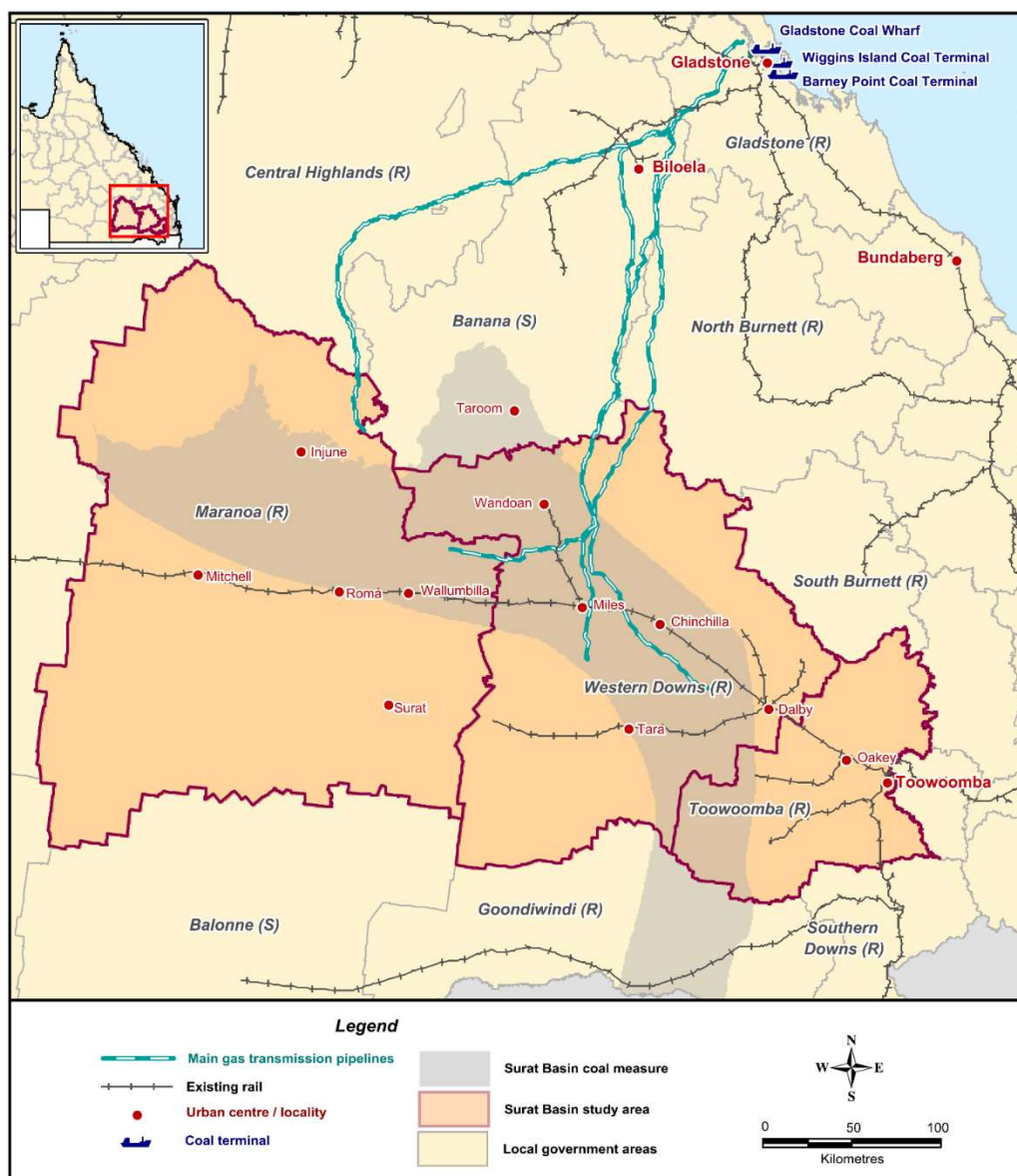
1.2 Context: The Western Downs, eastern Maranoa and CSG development

The Western Downs region

The Western Downs region is a local government area of nearly 40,000 square kms, located in southern Queensland approximately 300 kms west of the state capital of Brisbane. It comprises four main town centres of which Dalby is the largest. The region has a population of approximately 25,000 residents aged 18 years or more in 2016, who were the survey target population.

The main economic activity in the region is agriculture, forestry, and mining. Agriculture includes grain and cotton and some broad acre farming for sheep and cattle grazing. Mining related industries include gas exploration and production, coal mines, and power stations, with the Kogan Creek mine and power station opening in 2006. The population has grown since the 1990s and is expected to continue (RDA, 2018).

Figure 8 Map of three Local Government Areas in the Surat Basin: Western Downs, Maranoa, and Toowoomba



Source: Queensland Government Statistician's Office (2017)

The eastern Maranoa region

The Maranoa region is west of and adjacent to the Western Downs region and is about 480 kms west of Brisbane. As a local government area, it covers nearly 60,000 kms. The main land use is agricultural, especially cattle and sheep grazing, and cereal crop production, though also extends to timber production. However, the agriculture is less intensive than in the Western Downs region (RDA, 2018).

CSG activity occurs in the eastern half of the Maranoa region, which is used in this study as a comparison area for the Western Downs. The eastern half of the Maranoa region has approximately 8,000 residents aged 18 and over in 2016, and is more sparsely populated than the Western Downs region. The main town is Roma, which is included in the eastern part of the region along with the smaller townships of Amby, Injune, Jackson, Mitchell, Mungallala, Surat, Wallumbilla and Yuleba. This area has had CSG wells for longer than the Western Downs, since the mid-1990s.

CSG development in the Surat Basin and data collection for this study

Extensive development of the CSG industry in the study area has been underway since state government approvals were granted to three CSG production companies in 2011 and 2012. However, CSG exploration had been undertaken in Queensland since the 1970s with Roma already experiencing a longstanding history of conventional gas. Conventional gas was first discovered in Roma in the early 1900s and a gas pipeline connecting the Roma gasfields to Brisbane had opened in 1969 (Towler et al., 2016).

In February 2014, when the first data was collected for this study, the construction phase for the burgeoning CSG-LNG industry in the region had been underway for a couple of years. This had entailed building extensive infrastructure for extracting, gathering, treating, and transporting CSG gas from the gasfields in the Surat Basin to the Gladstone port on the Queensland coastline. At Gladstone the gas is liquefied and exported into global gas markets. The construction phase was extensive with estimated expenditure approximately \$60 - \$70 billion AUD (GasFields Commission Queensland, 2018; Towler et al, 2016). The workforce had involved non-resident workers (FIFO) who largely lived in workers camps throughout the region.

At the second data collection period, in February 2016, the industry was in a post-construction phase and the region had experienced a significant economic slowdown associated with reduced CSG related construction activity. The speed of transitioning into the operations phase was perceived to be unexpectedly slow and attributed largely to the international volatility in gas commodity prices.

By 2018, the third data collection period, production of CSG was occurring from approximately 1,000 wells in the area. A new gasfield of approximately 100 wells had recently been opened near Wandoan, and another field of 100 wells was planned for Tara. Four main gas companies hold petroleum and exploration leases in the region.

1.3 Theoretical concepts relevant to this report

1.3.1 COMMUNITY WELLBEING

A measure of community wellbeing is a snapshot in time of the perceived 'quality of life' within the community; an evaluation of the community as a 'good place to live' (McCrea, Walton, & Leonard, 2014). The notion of community wellbeing means different things to different people and thus a comprehensive measure of wellbeing that incorporates different '*dimensions*' of wellbeing is used to gain a deeper understanding of the various aspects of wellbeing that may influence the quality of life within the community.

Drawing on international research and previous research in Queensland's Western Downs region, we investigated wellbeing across 15 dimensions, which in turn can be grouped into six domains: social, environmental, political, physical infrastructure, economic, and health (McCrea et al., 2014). Each of the 15 dimensions was measured by collecting people's judgements and perceptions via computer assisted telephone interviews. Figure 9 depicts the 15 dimensions grouped into the six domains, which we measure and discuss further in this report.

Figure 9 Dimensions of community wellbeing grouped into six domains



Table 2 briefly describes each of the 15 dimensions of community wellbeing. The description reflects the types of questions that we use to measure each dimension. Typically, the survey uses 3-5 items or questions per dimension.

Table 2 Descriptions of the fifteen dimensions of community wellbeing

Dimension	Domain	Brief description
1. Personal safety	Social	Safety at home alone at night, walking outside alone at night, leaving the car by the roadside at night
2. Community spirit	Social	Friendliness, supporting each other, working together
3. Community cohesion	Social	Inclusion, welcoming of newcomers and people with differences
4. Local trust	Social	Trust within the community and with local leaders
5. Community participation	Social	Volunteering, supporting, and attending community based activities
6. Social interaction	Social	Visiting, talking, and going out with others in the community
7. Environmental quality	Environment	Quality of the environment in which people live - levels of dust and noise, overall quality of the general environment
8. Environmental management	Environment	Managing the environment for the long term: underground water, nature reserves; sustainability of local farming land
9. Local decision making and citizen voice	Political	Citizens having a say and being heard in local decision making, and trust in local government
10. Services and facilities	Physical infrastructure	Schools, child care, sports and leisure facilities, cultural facilities, shopping for food and everyday items, other shopping, medical and health services, and community support services
11. Town appearance	Physical infrastructure	General physical appearance of the town, cleanliness, parks, gardens
12. Roads	Physical infrastructure	Condition, safety, and amount of traffic on the roads
13. Income sufficiency	Economic	Household income sufficient for household expenses, and lifestyles; impact of rent or mortgage repayments on household finances
14. Employment and business opportunities	Economic	Job opportunities in the community, local businesses doing well
15. Health	Health	Diet and eating habits, exercise habits, physical and mental health

1.3.2 RESPONDING TO CHANGE: COMMUNITY RESILIENCE ACTIONS AND ADAPTATION

Coal seam gas development in a region has the potential for creating both opportunities and challenges for its communities from social, economic, and environmental perspectives (Measham & Fleming, 2014). Previous research identified different types of **community resilience actions** that are important in helping a community adapt to change in a CSG context. For example, strategic thinking such as planning, positioning and leadership; timely access to relevant information; and cross linkages within a community are all important actions for responding to the changes (Leonard, McCrea, & Walton, 2016; Walton, McCrea, & Leonard, 2014) Walton, McCrea, Leonard, & Williams, 2013).

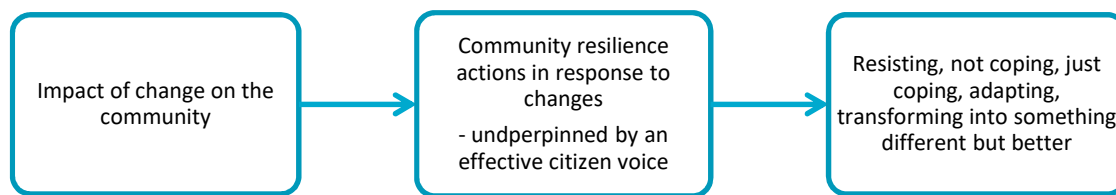
In addition, research indicates that a collective belief that the community can work together to address problems and take advantage of opportunities is also important for dealing with change (McCrea et al., 2014). Trust within the community and a sense of community participation in decision making, where communities feel they are being heard and have 'citizen voice', also play a vital part in communities working together to effectively deal with change (Walton et al., 2014; Williams & Walton, 2014). Figure 10 depicts these actions.

Figure 10 Types of community actions important for community resilience and responding to change



The literature also suggests that responding to change can be viewed on a spectrum of types of adaptive responses (Brown & Westaway, 2011). As shown in Figure 11, these responses can range from resisting change, to coping, to adapting, to transforming. Resilient responses can include those responses where communities adapt and potentially transform into something different but better. Moreover, previous research suggests that the way in which communities responds to these changes is linked to wellbeing within the community and a sense of wellbeing for the future (Leonard et al., 2016; McCrea, Walton, & Leonard, 2016; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008).

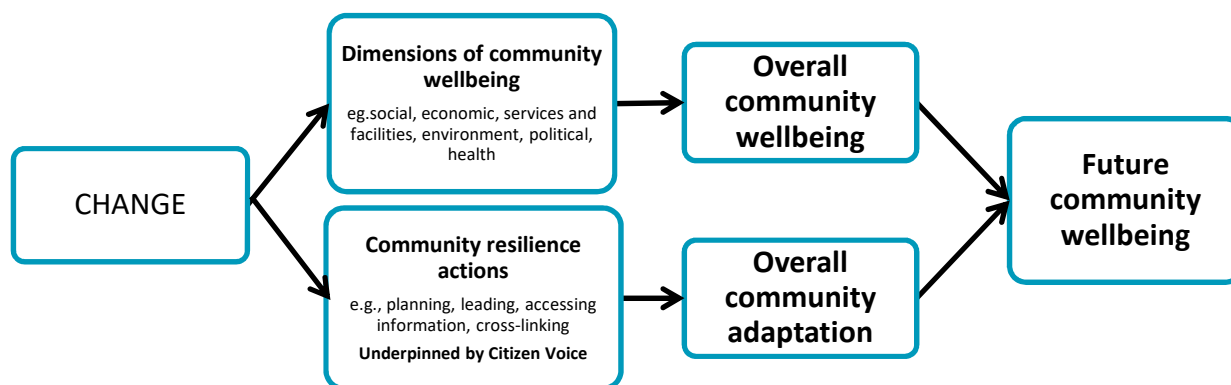
Figure 11 Responding to change



1.3.3 EXPECTED FUTURE COMMUNITY WELLBEING

In addition to measuring current perceptions of wellbeing, the survey also investigates expected future community wellbeing in three years' time. As shown in Figure 12, a sense of future wellbeing relates not only to current levels of wellbeing but also to community resilience actions in response to change, including strategic responses, working together, community commitment, and an effective citizen voice. Previous research suggests that if a community believes it is dealing effectively with change, then its level of expected wellbeing for the future will be higher, taking into account current community wellbeing (McCrea et al., 2016).

Figure 12 Explaining future community wellbeing



1.3.4 ATTITUDES AND PERCEPTIONS OF CSG DEVELOPMENT AND THE CSG SECTOR

Community acceptance of an industry's activities within a community is important for the establishment and ongoing operation of a new industry. This acceptance is commonly referred to as a 'social Licence to operate' (SLO), whereby the industry meets the ongoing expectations of the community with regards to its actions and thus gains **ongoing** acceptance (Gunningham, Kagan, & Thornton, 2004; Moffat & Zhang, 2014). Earlier research conducted in Queensland CSG regions found that expectations revolve around aspects of community wellbeing such as affordable housing, good roads, job opportunities, sustainable businesses, ensuring water quality and quantity, maintenance of community spirit and trust, and engaging with the community from a position of mutual respect (Williams & Walton, 2014). The importance of trust, confidence in governance, benefits delivered to communities, and the type of relationship that the CSG company establishes with their host community have been found to be important factors for community acceptance in extractive industries more broadly (Moffat & Zhang, 2014). Models of social licence to operate have been established for extractive industries incorporating other factors like community concerns, the distribution of costs and benefits, and knowledge of the industry (Moffat et al., 2017; Walton & McCrea, 2017).

Building on previous studies, the research conducted in the Narrabri region (Walton & McCrea, 2017) identified a range of factors that shaped people's perceptions and attitudes towards CSG development using the context of a proposed CSG project in an appraisal phase. As listed in Box 1, these factors can be described as the underlying drivers of trust and acceptance, and also account for a lack of trust and acceptance. When people have high levels of these factors then they are likely to have more positive views towards CSG development, and when they have low levels of these factors they are more likely to have negative views, with one exception: when people have high levels of concern over possible negative impacts from CSG development then they are likely to have more negative views of the industry and its development.

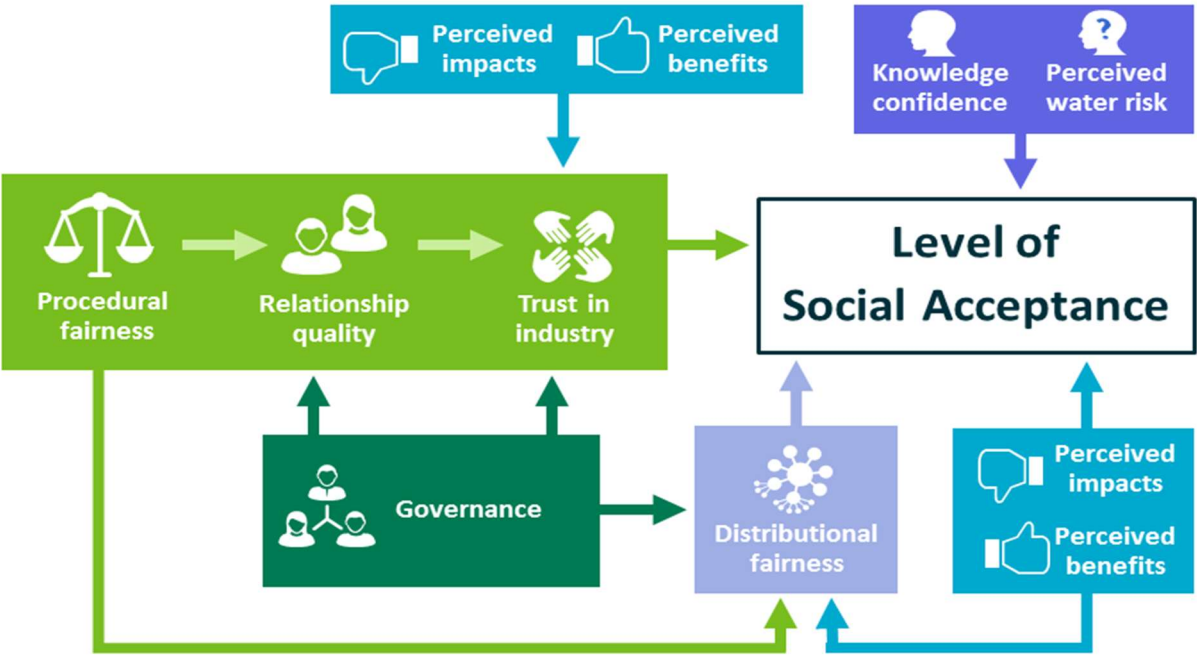
Box 1 List of factors that underlie trust and acceptance of CSG development

Factors that shape local attitudes towards CSG development include:

- *Perceptions of benefits:* both local and societal benefits
- *Perceptions of impacts:* both current and long term effects
- *Trust in CSG companies*
- *Quality of relationship* with CSG companies
- *Procedural fairness*
- *Governance* of the industry: compliance, regulations, planning, and trust in governing bodies
- *Distributional fairness:* in terms of how benefits and costs will be shared
- *Perceived water risk:* beliefs about the manageability and severity of the risk to underground water
- *Knowledge confidence:* people's confidence in their knowledge about the CSG industry

Figure 13 shows a model of how these factors work together to explain a person's level of acceptance (or lack thereof) for CSG development within their community. Each of these factors are important to communities and represent concerns that communities have about CSG development, their expectations if trust in the industry is to be achieved, and their views related to fairness and how benefits are distributed and costs borne by host communities. By measuring these factors, we provide empirical evidence to the CSG industry and key stakeholders as to the current levels of these factors within communities. Results can be used to guide industry improvements, government initiatives, and strengthening policy and standards governing the CSG sector.

Figure 13 A statistical model explaining social acceptance, or lack thereof, for CSG development



2 Methods

2.1 Survey overview

The survey was conducted during March – April 2018. It used computer assisted telephone interviewing (CATI) to survey 423 residents of the Western Downs region and 200 residents of the eastern Maranoa region, both located in the Surat Basin. A third party research company administered the survey using a database of landline and mobile telephone numbers to randomly select residents based on pre-determined selection criteria and demographic quotas. The quotas were used to achieve a representative sample. The survey took 30 minutes to complete on average and a response rate of 26% was achieved, which is considered a good outcome for lengthy telephone surveys.

Inclusion criteria and quotas

- Participants needed to be residents of the shire (not FIFO or DIDO shift workers)
- Aged 18 years or older.
- Quota sampling to obtain a representative sample based on age, gender, employment status, and location characteristics according to the Australian Bureau of Statistics (ABS, 2011; 2016).

2.2 Survey Procedure

The survey comprised approximately 180 questions covering six main topics. As shown in Figure 14, the initial part of the survey included screening and demographic questions, plus a question asking participants to identify one of five main towns and surrounds they felt most part of. This town and surrounds became the subsequent reference for community related questions for that participant. For example, if a participant identified Tara and surrounds as their community then all subsequent questions were framed in relation to 'the town and surrounds of Tara'. In addition, this town and surrounds became part of five 'subregions' (Dalby, Chinchilla, Miles-Wandoan, Tara, and Roma), which is used for reporting results. Residents also identified whether they lived in or out-of-town.

The survey proceeded with community wellbeing questions, followed by community resilience and adapting questions, then attitudes and perceptions about CSG development and the sector, followed by knowledge and information questions, and finally a few more demographic questions.

At the end of the survey participants were asked whether they would like to be in a prize draw for \$50 gift voucher as a thank-you for completing the survey. Twenty participants were randomly selected to receive vouchers. These procedures adhered to the National Statement on Ethical Conduct in Human Research, as well as the ethical review processes of the CSIRO.

Figure 14 CSIRO Wellbeing and responding to change survey format



ETHICS REVIEW

All project procedures were reviewed by CSIRO's Ethics Committee and approval granted.

2.3 Survey Sample

The total sample ($N = 623$) comprised residents from the Western Downs ($n = 423$) and the eastern part of the Maranoa region ($n = 200$).

Sample profile

Almost half the total sample lived in a town (55.4%) with the remainder living out of town (44.6%). Participants were asked to identify which town and surrounds they felt most part of so that we could ensure we had representation from each of the main towns and surrounding districts in the region. We use these areas as 'subregions' for comparisons within the report. Table 3 shows these subregions included: Dalby and surrounds; Chinchilla and surrounds; Miles-Wandoan and surrounds; and Tara and surrounds. The eastern Maranoa essentially represents Roma and surrounds.

Table 3 Sample profile

Criteria	Number of participants	Percentage of sample
Subregions		
- Dalby and surrounds	121	28.61%
- Chinchilla and surrounds	102	24.11%
- Miles-Wandoan and surrounds	100	23.64%
- Tara and surrounds	100	23.64%
- TOTAL Western Downs	423	100%
- Eastern Maranoa (Roma and surrounds)	200	-
In-town (Out of town) Western Downs	200 (223)	47.3% (52.7%)
In-town (Out of town) eastern Maranoa	145 (55)	72.5% (27.5%)
Farmers with active CSG leases	58	27.2%
Other farmers (no CSG leases and inactive CSG leases)	155	72.8%
TOTAL NUMBER OF FARMERS	213	100%

Sample representativeness

The 2018 sample was somewhat over-representative of older females and under-representative of younger males, so the sample was weighted by age and sex to be representative of the 2016 population census for the Western Downs and eastern part of the Maranoa regions. See section 2.5.2. As a result, the weighted sample closely matched the 2016 population census on age and sex. Maintaining consistency over time in the characteristics of the weighted sample means changes in results over time are not affected by changes in age, gender, employment status or whether living in or out-of-town.

2.4 Measures

2.4.1 RESPONSE SCALES

As in the 2014 and 2016 surveys, questions mainly used a response scale from 1 to 5 where 1 was the least and 5 was the most. Participants were either asked to indicate how much they agreed with a statement, or how satisfied they were with the issue in question. The agreement scales ranged from 1 = strongly disagree to 5 = strongly agree, and the satisfaction scales ranged from 1 = very dissatisfied to 5 = very satisfied. The demographic questions required participants to choose the most accurate category. There was one open ended question for farmers with CSG leases on their property, which asked for a short response summarising what they would like improved in their dealings with CSG companies.

2.4.2 SURVEY ITEMS

The 2018 survey comprised approximately 180 questions (items) covering six main topics. A brief outline of the items used to measure each topic area is summarised in Table 4. Descriptions of individual measures and scales are detailed in Appendix B along with reliability of each scale, and how items were developed. The survey questions with exact wording of all items are detailed in Appendix F.

Table 4 Summary of survey items

SURVEY TOPIC	BRIEF DESCRIPTION	
1. Community wellbeing	73 items	<i>Fifteen dimensions</i> of wellbeing each with their own set of multiple items (68 items) <i>Overall wellbeing</i> , five items rating the community as a suitable place to live for different segments of the population (children / teenagers / seniors), and assessing the community overall as a place to live (that offers a good quality of life / they are happy to be living in)
2. Community resilience and adaptation	15 items	<i>Community resilience actions</i> in response to proposed CSG development (planning, leadership, accessing information, sharing, perseverance, supporting volunteers, getting involved, working together) <i>Community coping and adapting</i> , perceptions of the community's coping and adapting to a proposed CSG development
3. Expected future community wellbeing	3 items	<i>Expected future community wellbeing</i> in 3 years hence (as a place that offered a good quality of life / where they would be happy to be living). They were also asked to choose how wellbeing in their community might change in the future (decline / stay about the same / improve).
4. Attitudes and perceptions of CSG and the sector	82 items	<ul style="list-style-type: none"> • Perceived impacts • Risks to water (manageability / severity) • Perceived benefits – local and societal • Perceived fairness – procedural and distributional • Trust in CSG companies • Quality of relationships and responsiveness of CSG companies • Governance – formal (compliance, regulations); informal (planning, collaboration); trust in CSG governing bodies • Feelings towards coal seam gas, measuring positive emotions (pleased, optimistic) and negative emotions (angry, worried) • Attitudes towards CSG development – acceptance of CSG development in the region
5. Knowledge, and information sources	14 items	Use of different types of information sources; self-rated knowledge about the industry / gas extraction / impact on underground water; need for more information; previous experience with CSG sector
6. Demographic questions	9 items	<ul style="list-style-type: none"> • age, gender, employment status, household income, home ownership, education, farm ownership • location type (live in or out-of-town), subregion (Dalby, Chinchilla, Miles-Wandoan, Tara, and eastern Maranoa)

2.5 Analyses

2.5.1 STATISTICAL TESTS

A range of bivariate and multivariate analyses were undertaken including t-tests, chi-square tests, multiple regression, and path analyses. These analyses are not explained in detail in the body of this report, but details are shown in relevant Appendices.

2.5.2 ADJUSTING RESULTS FOR GENDER AND AGE OF RESIDENTS

As the sample was somewhat over representative of females and older residents, the analyses were weighted by gender and age. Weighting is a method to adjust the results so that the findings are not biased by the gender or age distribution of the sample respondents. For this survey, weighting by gender and age means giving less weight to the responses of females and older residents because they were over-represented in the sample and more weight to the responses of males and younger and middle aged residents who were under-represented in the sample. This approach gives a more accurate estimate of the views across the Western Downs and eastern Maranoa regions. See Appendix A for more details.

2.5.3 REPORTING RESULTS

Findings reported as 'significant' means that they were 'statistically significant' at the $p = .05$ level. This means there was less than a five percent chance that the findings were due to chance. This is a convention in scientific report writing and denoted as $p < .05$. In addition, in some instances scores have been rounded to one decimal place when depicted in the graphical figures. Results of the survey are typically described as average scores out of 5, using a scale from 1 to 5 where 1 is the least and 5 is the most. A score below the midpoint of 3 is considered negative or unfavourable on average, except where otherwise indicated.

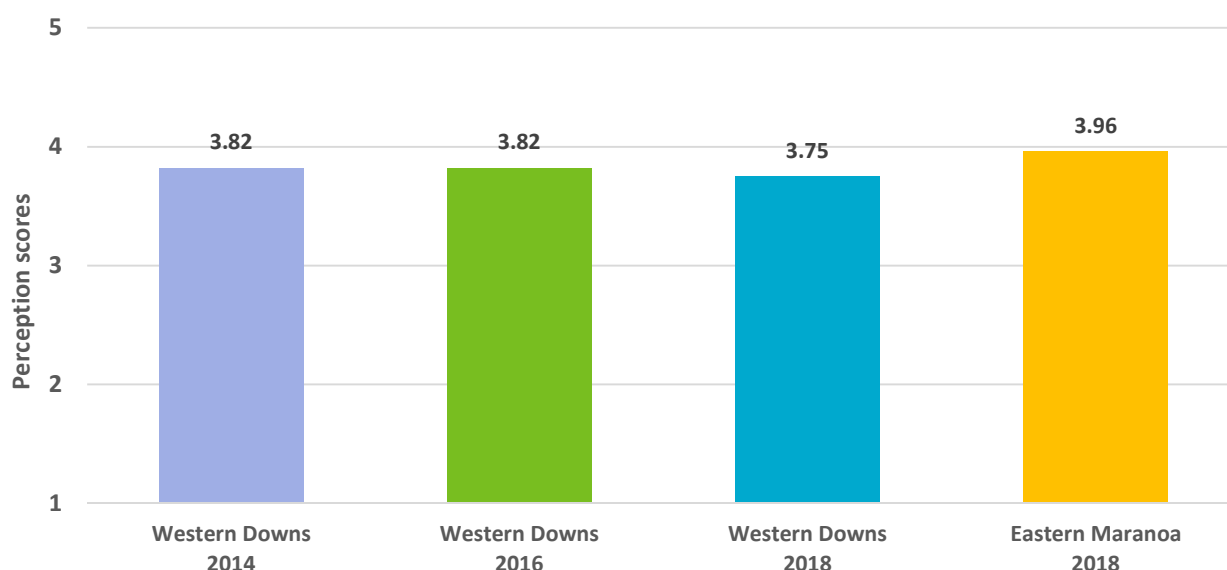
Findings

3 Community Wellbeing

3.1 Overall community wellbeing

In 2018, overall community wellbeing for the Western Downs region remained robust ($M = 3.75$) and virtually unchanged over the four year period. As shown in Figure 15, community wellbeing levels in the eastern Maranoa were also very robust in 2018 ($M = 3.96$).

Figure 15 Mean scores of overall community wellbeing: Western Downs region 2014-2016-2018 and eastern Maranoa 2018



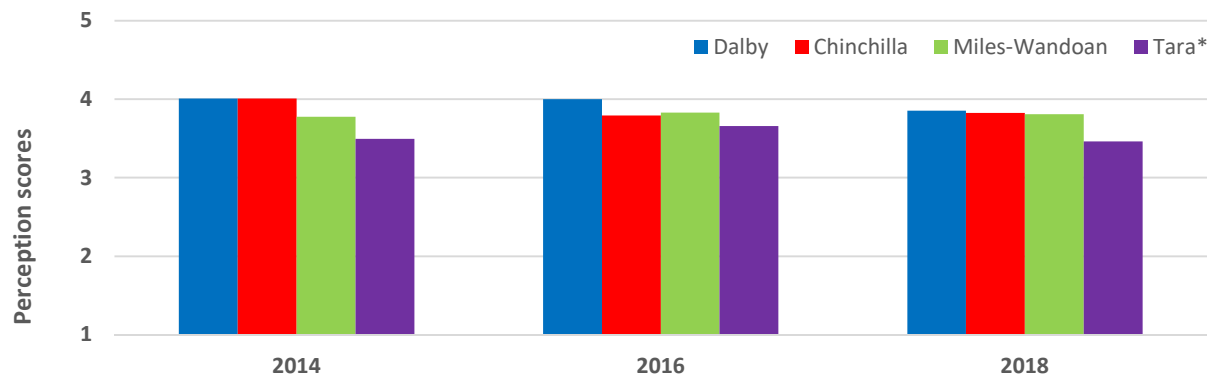
Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions

Differences among subregions

Residents rated community wellbeing similarly across the region except for Tara and surrounds, where people rated their community wellbeing in 2018 as lower than others in the region: Dalby ($M = 3.85$); Chinchilla ($M = 3.82$); Miles – Wandoan ($M = 3.81$); and Tara ($M = 3.46$). Tara residents reported statistically lower levels of community wellbeing in 2014 and 2016 as well.

Figure 16 shows, when comparing results over the four years Tara has always perceived its community wellbeing as lower than the other subregions with the larger centre of Dalby tending to show the highest level of overall community wellbeing over the four years. Chinchilla was the only sub-region that statistically showed a change in community wellbeing with a lowering in 2016 compared to 2014.

Figure 16 Community wellbeing scores for Western Downs subregions: 2014, 2016, and 2018



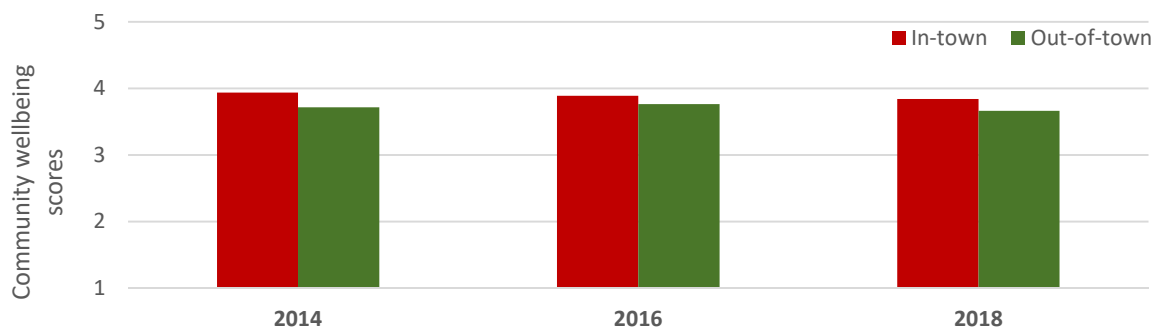
Note: Statistical difference in Chinchilla scores between 2014 and 2016 ($p < .05$)

*Tara community wellbeing score statistically lower than other subregions in 2018, 2016, and 2014

Differences between Out-of-town and In-town

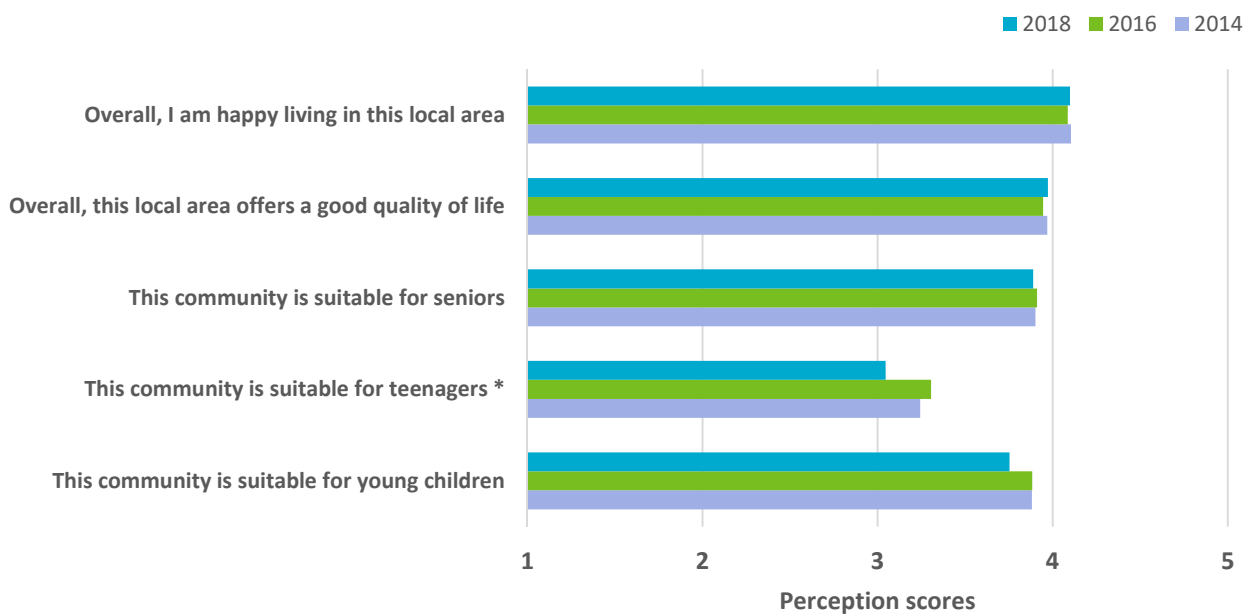
In 2018, people who lived out of town compared to people who lived in town indicated statistically lower levels of community wellbeing ($M = 3.66$ and $M = 3.84$ respectively). Figure 17 shows this pattern was consistent over the years. The main drivers for these differences were lower perceptions of services and facilities in their local communities, and lower levels of satisfaction with social interactions, and roads.

Figure 17 Overall community wellbeing: In-Town and Out-of-town Western Downs - 2014, 2016, and 2018



The individual items of overall community wellbeing showed that residents in the Western Downs on average were very happy living in the local area and see it as offering a good quality of life. However, as shown in Figure 18, they perceived the community as less suitable for teenagers than for young children or seniors, which lowered the overall wellbeing score. In 2018, the 'community as a suitable place for teenagers' rating was statistically lower than 2016 and 2014.

Figure 18 Mean scores of overall community wellbeing items: Western Downs region 2014, 2016, and 2018



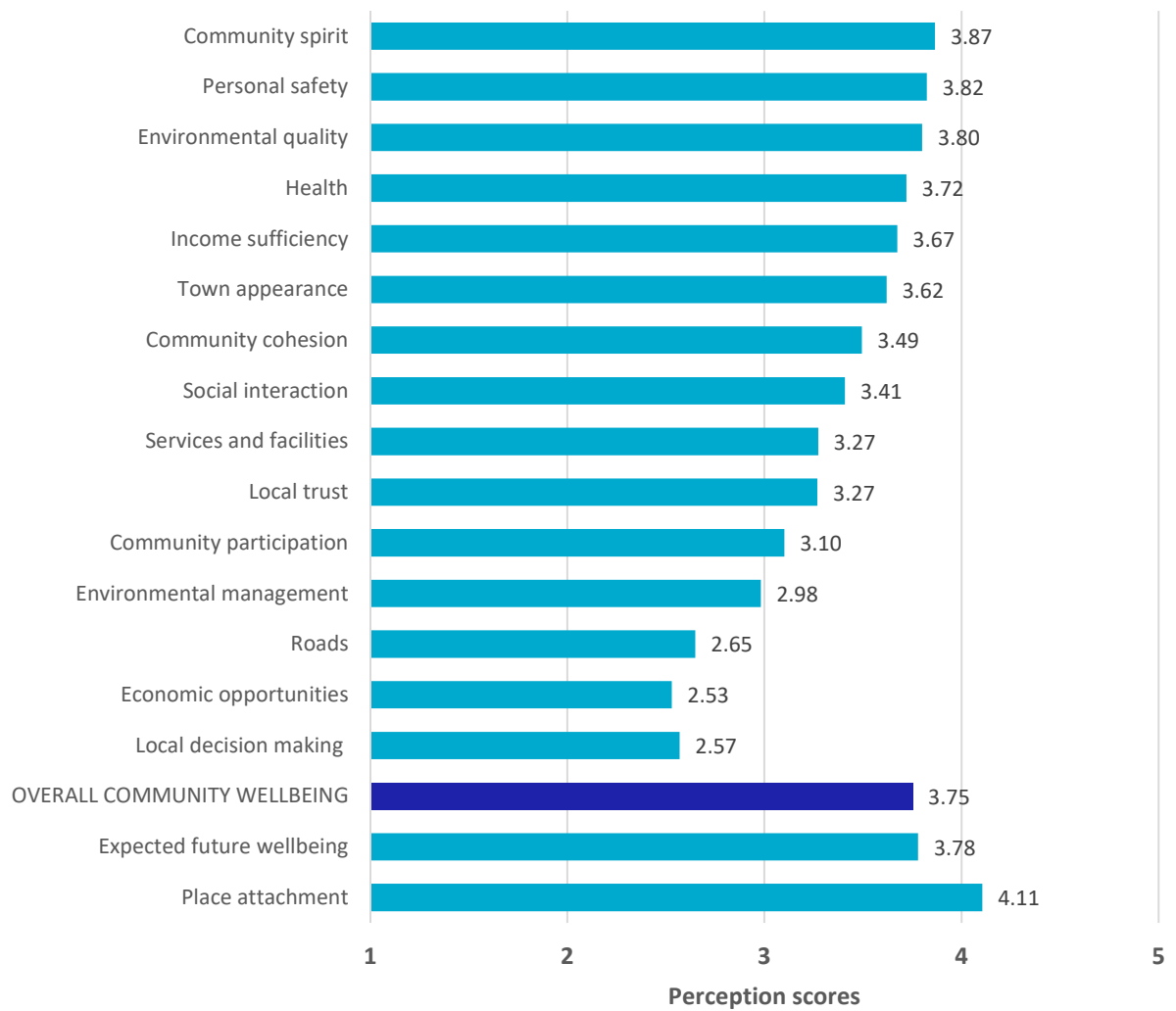
Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions; * statistical difference in mean scores between years ($p < .05$)

3.2 Dimensions of community wellbeing

The survey measured 15 different dimensions of community wellbeing for 2018. In the Western Downs region, eleven dimensions were rated positively, one as borderline, and three unfavourably on average. As shown in Figure 19, perceptions of *community spirit*, *personal safety*, and *environmental quality* were viewed the most favourably ($M = 3.87$, $M = 3.82$, and $M = 3.80$ respectively) with *local decision making*, *employment and business opportunities*, and *roads* perceived the least favourably ($M = 2.47$, $M = 2.53$, and $M = 2.65$ respectively).

There were very high levels of place attachment ($M = 4.11$) showing that people felt a high sense of belonging to their community. In addition, expected future wellbeing was also robust ($M = 3.78$) indicating people felt they would be happy to be living in the area in three years' time and that they expected the area would offer a good quality of life.

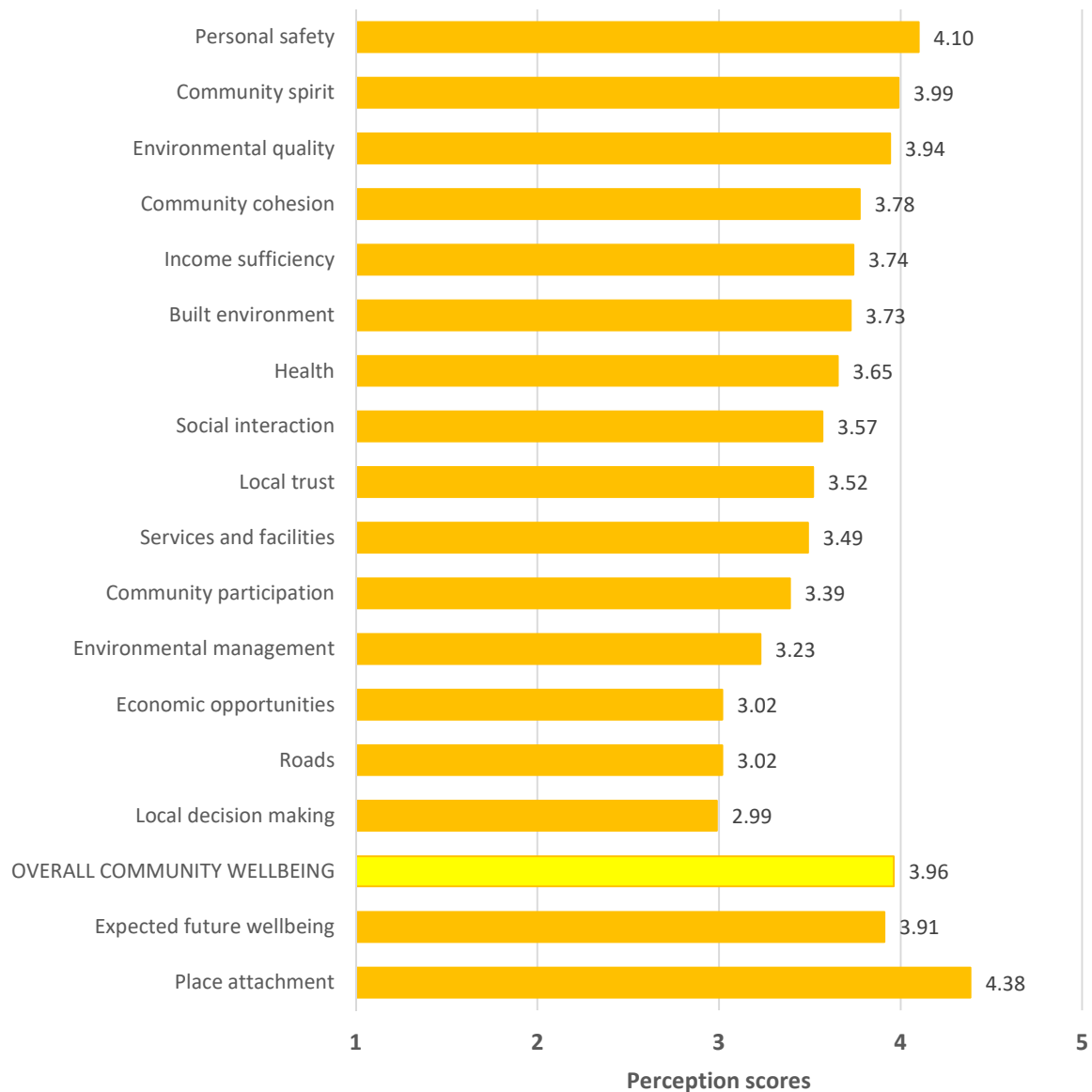
Figure 19 Mean scores for community wellbeing dimensions: Western Downs region 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions

Community wellbeing in the eastern Maranoa was also very robust in 2018, with no dimensions being viewed unfavourably. Figure 20 shows that perceptions of *personal safety*, *community spirit*, and *environmental quality* were rated the highest ($M = 4.10$, $M = 3.99$, and $M = 3.94$ respectively) and with *local decision making*, *roads*, and *employment and business opportunities* rated the lowest ($M = 2.99$, $M = 3.02$, and $M = 3.02$ respectively). Place attachment was very high ($M = 4.38$) as well as expected future community wellbeing ($M = 3.91$).

Figure 20 Mean scores for community wellbeing dimensions: eastern Maranoa region 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions

Changes in community wellbeing dimensions: Western Downs 2014 – 2016 – 2018

Since 2014 in the Western Downs, five of the fifteen dimensions showed statistically significant changes while the other ten dimensions remained fairly constant, along with place attachment.

- *Environmental quality, environmental management, and roads* showed gradual but ongoing improvement from 2014
- *Local decision making processes* showed a gradual negative change over the four year period
- *Employment and business opportunities* showed the greatest change demonstrating a large drop from 2014 to 2016 in the post-construction phase, with some improvement in 2018 in the operations phase

Figure 21 demonstrates these changes and Table 5 summarises the trends for all dimensions since 2014. The actual scores for each dimension for 2014, 2016, and 2018 are found in Appendix D.

Figure 21 Mean scores for community wellbeing dimensions that changed over time: Western Downs region 2014, 2016, 2018

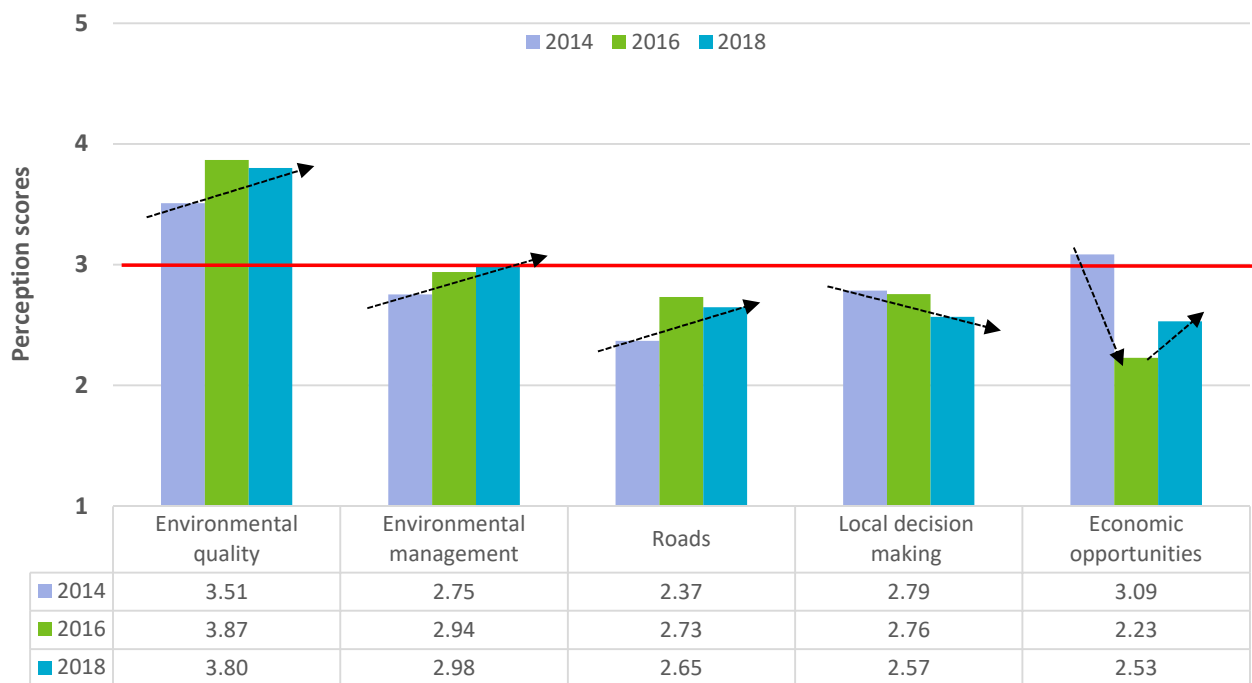


Table 5 Summary of changes in community wellbeing dimensions between 2014 – 2016 – 2018: Western Downs

Community wellbeing dimension	Changed	Description of change
Environmental quality	Yes	Improved over time, statistically lower perceptions during construction phase of 2014
Environmental management	Yes	Improved since 2014, however still borderline perceptions
Roads	Yes	Improved since 2014, although still unfavourable perceptions on average
Economic opportunities	Yes	Up and down. Showed the biggest change over the four year period with the lowest point post-construction in 2016 and improvement in 2018 operations phase
Local decision making	Yes	Satisfaction with decision making processes reducing over time. Communities feeling less heard in 2018 than previous years
Services and facilities	No	Virtually unchanged with moderately high perceptions of services and facilities maintained over the four year period
Built environment	No	No real change in how people perceived the appearance of the towns
Health	No	A small reduction in 2018 compared to 2014, reduced satisfaction with diet and exercise and mental health, although mental health values still very high on average
Income sufficiency	No	No real change, even during the economic slowdown of 2016. People still felt they had sufficient income for household expenses and the lifestyle they enjoy, and that rent or mortgages did not impact greatly on household finances on average
Personal safety	No	Virtually unchanged over time; people felt similarly high levels of safety
Community cohesion	No	Tendency to show an up and down pattern; community cohesion highest during construction phase of 2014; remained robust over the period
Community spirit	No	Stayed relatively constant didn't seem to change with industry phases
Local trust	No	Trust within the community was high and remained constant over the period
Social interaction	No	Virtually unchanged
Community participation	No	Virtually unchanged
Place attachment	No	Always highly rated, people maintained a strong sense of belonging

Changes in community wellbeing for subregions over time

At the subregional level, nine dimensions statistically changed over time for towns with Chinchilla reporting the most changes and Dalby the least changes, as shown in Table 6. Although some changes represent a decrease from 2014, levels in 2018 were still high for personal safety, community spirit, community cohesion, health, and services and facilities. In contrast, economic opportunities and roads show improvements, but are still in the unsatisfactory range on average for those communities. Specific ratings for each of the dimensions for each subregion for 2018 are tabled in Appendix D.

Table 6 Trends in community wellbeing at the subregional level: 2014-2016-2018: Western Downs subregions

Changed wellbeing dimensions	Dalby	Chinchilla	Miles-Wandoan	Tara
Personal safety	-	Lower in 2016 and 2018 than 2014	-	-
Community spirit	-	Lower in 2018 than 2014	-	-
Community cohesion	-	Lower in 2016 and 2018 than 2014	-	-
Health	-	Lower in 2016 than 2014	-	-
Economic opportunities	Lower in 2016 than 2014 and 2018	Lower in 2016 than 2014	Lower in 2016 than 2014	Lower in 2016 and 2018 than 2014
Roads	-	Higher in 2016 than 2014	Higher in 2016 than 2014	-
Services and facilities	-	-	Lower in 2018 than 2016	-
Environmental quality	-	-	Higher in 2016 than 2014	Higher in 2016 than 2014; then lower in 2018
Local decision making	-	-	-	Lower in 2018 than 2016 and 2014

3.3 Most important dimensions of community wellbeing

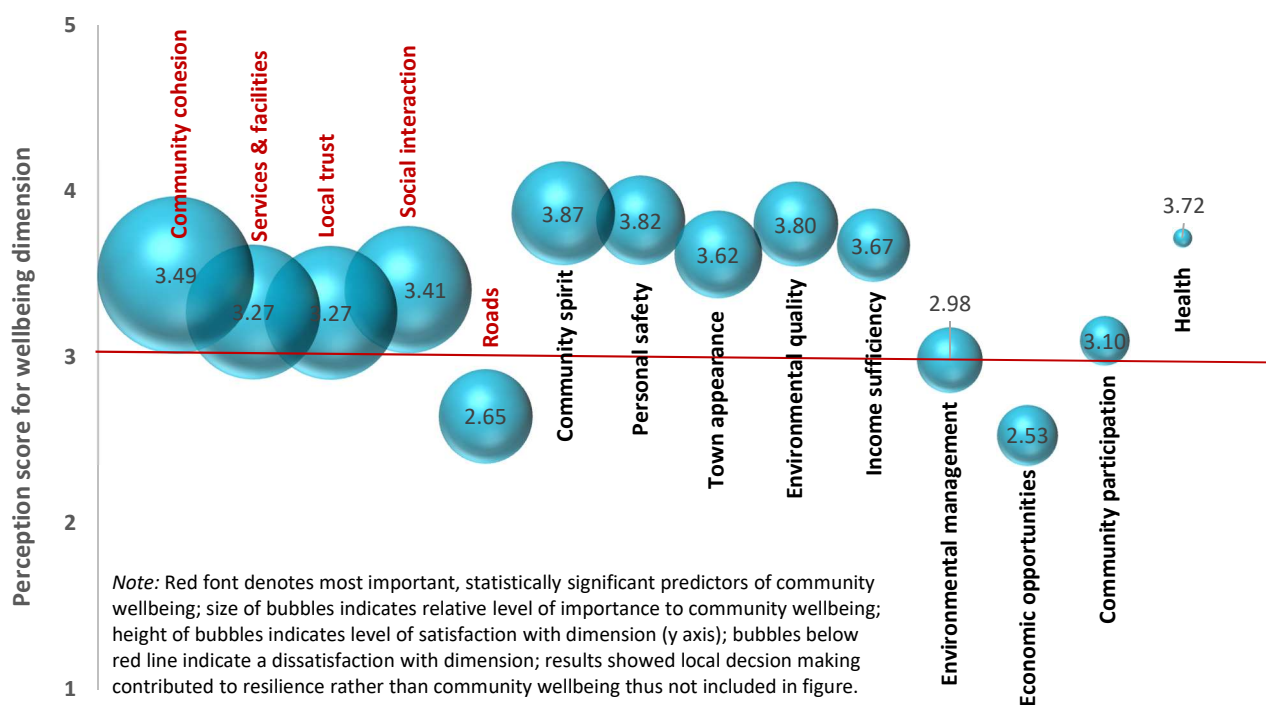
Analysis showed five key dimensions or underlying drivers that were most important to a sense of wellbeing in the community and these are depicted in Figure 22. When residents felt these aspects of their community were strong they also viewed their community as a great place to live, and a place that offers a good quality of life to all ages. Alternatively, when these dimensions are viewed as low then residents also view community wellbeing as low. Appendix C details the statistical analyses.

The importance of identifying the most important dimensions is that they may not necessarily be the dimensions with the lowest or highest perception scores. For example, even though roads might have a relatively low score, roads is not the most important predictor of whether the community is seen as a good place to live. Identifying the underlying drivers of community wellbeing helps communities to understand where to focus resources that can help to build or strengthen the wellbeing within their community.

The most important dimensions for a sense of wellbeing within the community in 2018 were:

- The level of *community cohesion* – for example inclusiveness within the community, and welcoming of newcomers and people with differences
- The level of *services and facilities* – for example schools, child care, medical and health services, sports and leisure facilities, community support services, food and other shopping
- The level of *local trust* within the community – for example among the residents and in local leaders
- The level of *social interaction* – for example visiting, talking to, and going out with others in the community
- The level of satisfaction with *roads* – for example the condition, safety, and amount of traffic on the roads

Figure 22 Community wellbeing dimensions ordered according to importance: Western Downs 2018



Changes over time in importance of wellbeing dimensions

The underlying drivers of wellbeing were consistent over time, with the top four groups of drivers being similar across the three different industry cycles, as shown in Table 7. Local trust became significantly more important in 2018. Economic opportunities and environmental management were more important for community resilience (see Section 4.2). Results demonstrate community wellbeing as largely driven by social aspects and services and facilities.

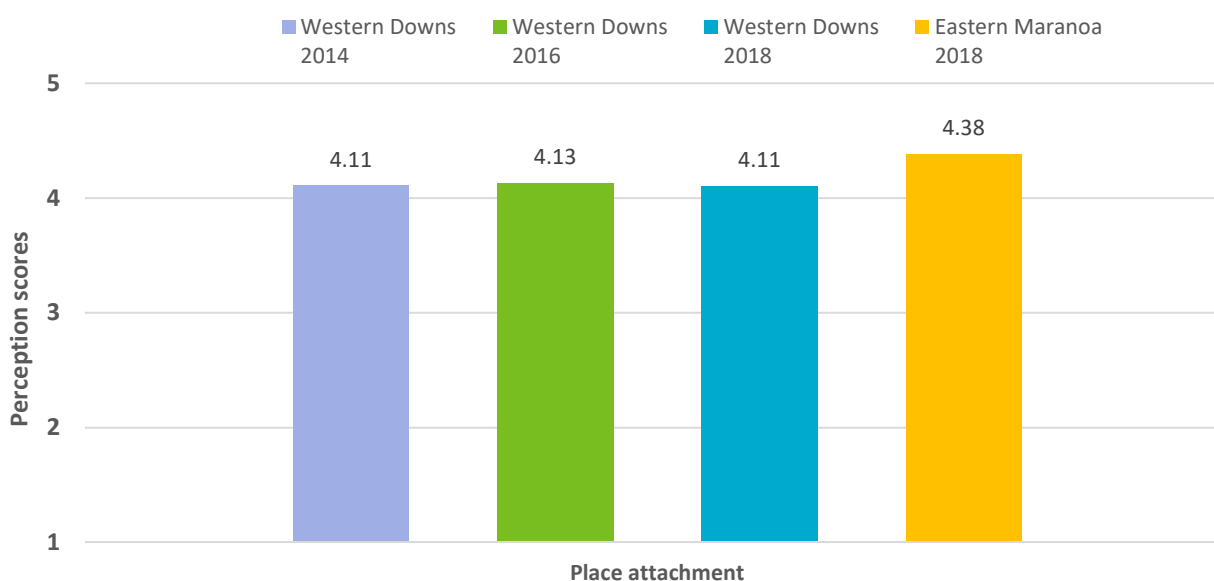
Table 7 Important drivers of community wellbeing for the Western Downs over time (ranked by importance)

2014 Construction phase	2016 Post-construction	2018 Operations phase
Services and facilities	Services and facilities	Community cohesion
Community spirit	Community spirit	Services and facilities
Community cohesion	Personal safety	Local trust
Social interaction	Social interaction	Social interaction
Personal safety	Town appearance	Roads
Town appearance	Community cohesion	Community spirit

3.4 Place attachment

Residents' attachment to place remained very high and consistent over the three data collection periods in the Western Downs region. Results showed that there was virtually no change in the level of belonging or sense of pride that people felt towards their local town and surrounding area. Strong place attachment also contributed to optimism about the future wellbeing of their communities. The eastern Maranoa also showed very high levels of place attachment, as shown in Figure 23.

Figure 23 Mean scores for place attachment: Western Downs 2014-2016-2018 and eastern Maranoa 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions

4 Community resilience and responding to changes associated with CSG development

4.1 Adapting to CSG development

As with previous years, in 2018 there was a diversity of views regarding how people felt their communities were coping and adapting to CSG development. These views ranged from people feeling their communities were resisting changes through to feeling their communities were changing into something different. As shown in Figure 24, most people either believed their community was adapting to the changes (45%) or only just coping with the changes (39%), with very few people believing their communities were resisting (5%), not coping (7%), or alternatively changing into something different but better (4%). The eastern Maranoa held more favourable views overall about how their communities were adapting to CSG development.

The trend for this pattern has been similar over the four years as shown in Figure 25 for the Western Downs region, with no real change between 2014, 2016, and 2018 in the proportions of people who thought their communities were resisting not coping, only just coping, adapting or changing into something different but better.

Figure 24 Community perceptions of adapting to CSG development: Western Downs and eastern Maranoa 2018

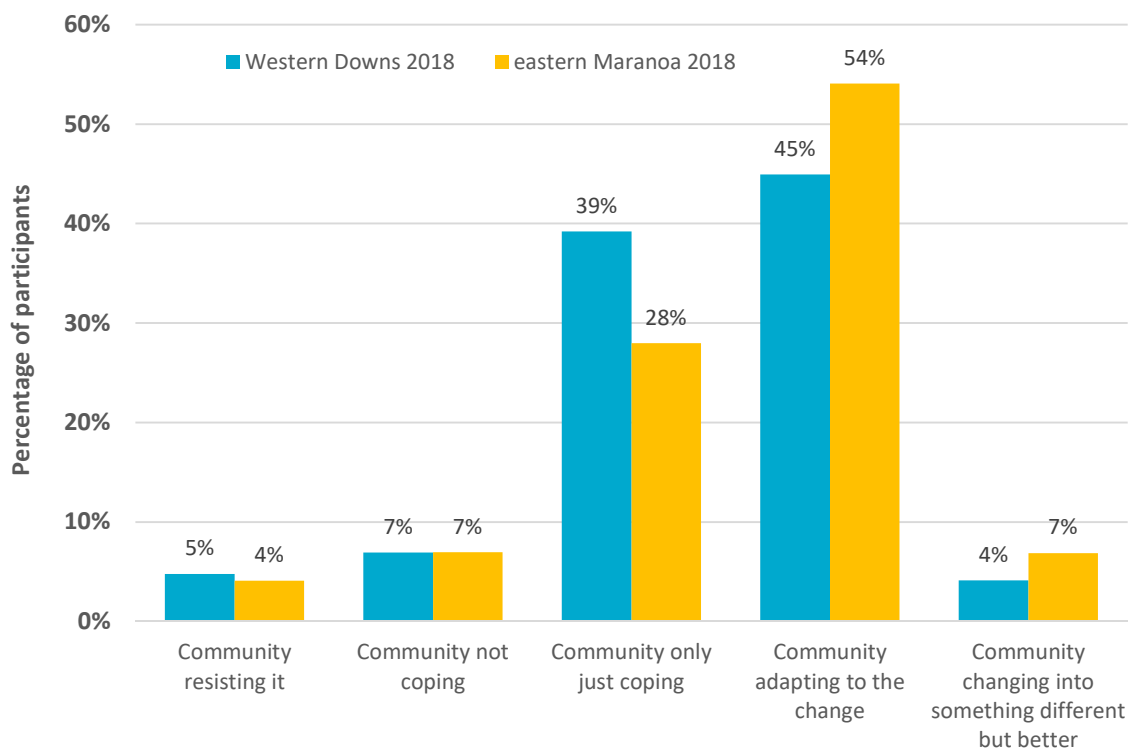
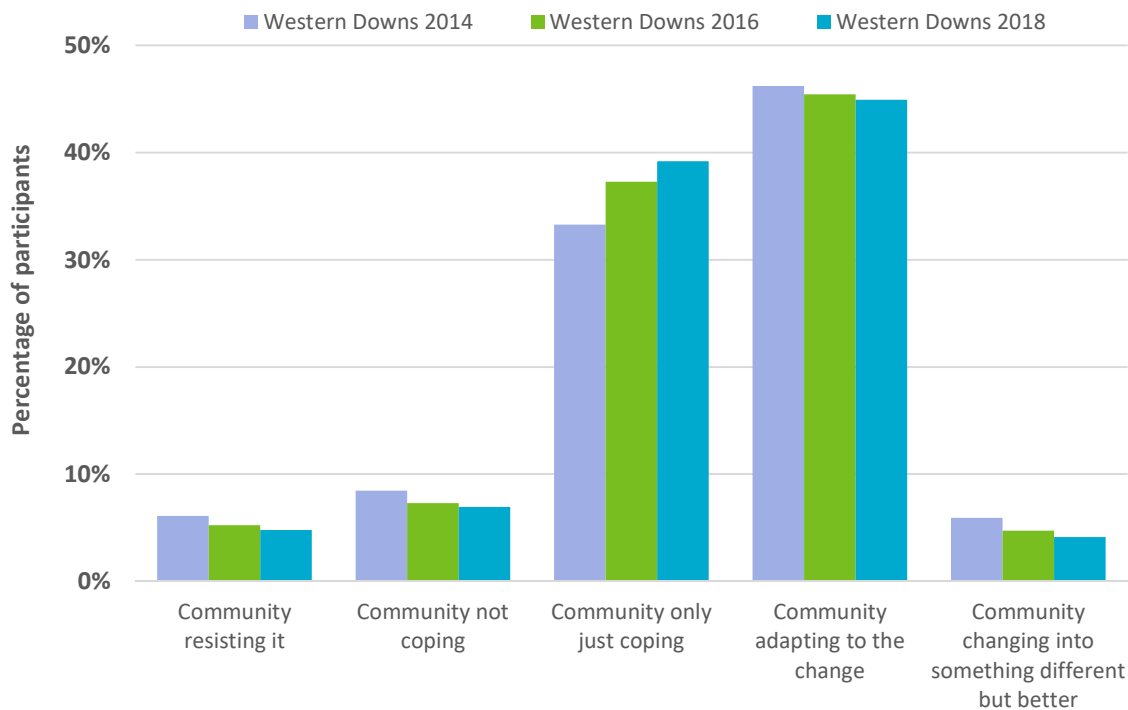


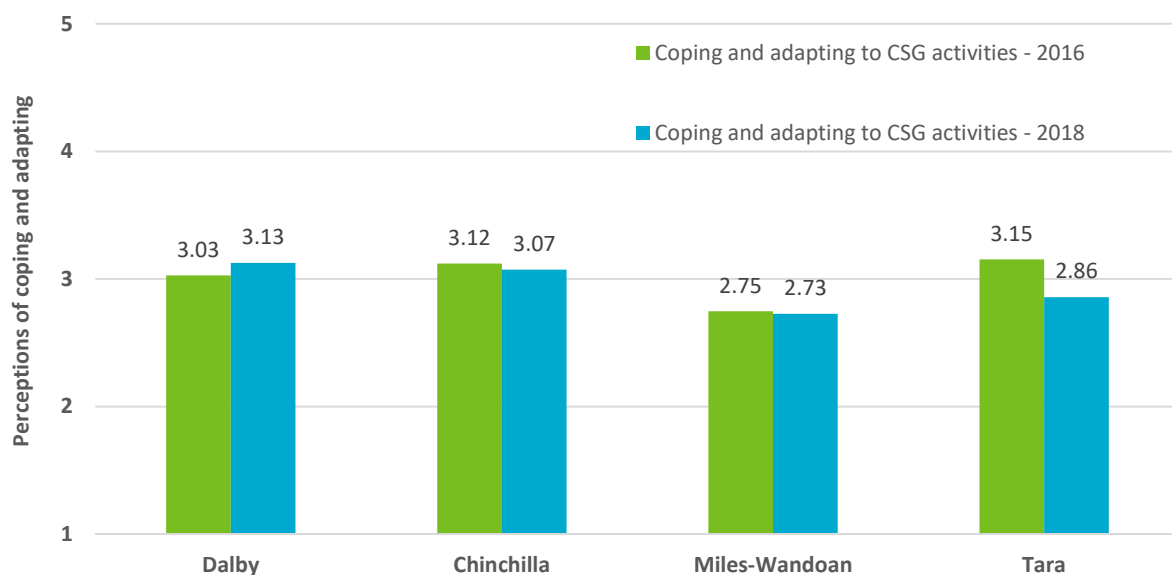
Figure 25 Perceptions of community adapting to CSG development over time: Western Downs 2014 – 2016 – 2018



Differences among subregions

Using a continuous two item measure, perceptions of coping and adapting to CSG development varied among the subregions. Miles-Wandoan showed the lowest levels of coping and adapting in the region for both 2016 and 2018, as shown in Figure 26. However, these differences were relatively constant over time, except for Tara. Tara had lowered in 2018 from a positive perception of how they were coping and adapting in 2016 ($M = 3.15$) to a negative perception on average ($M = 2.86$). These two items were not asked in 2014.

Figure 26 Community perceptions of adapting to CSG development: Western Downs subregions 2016 and 2018



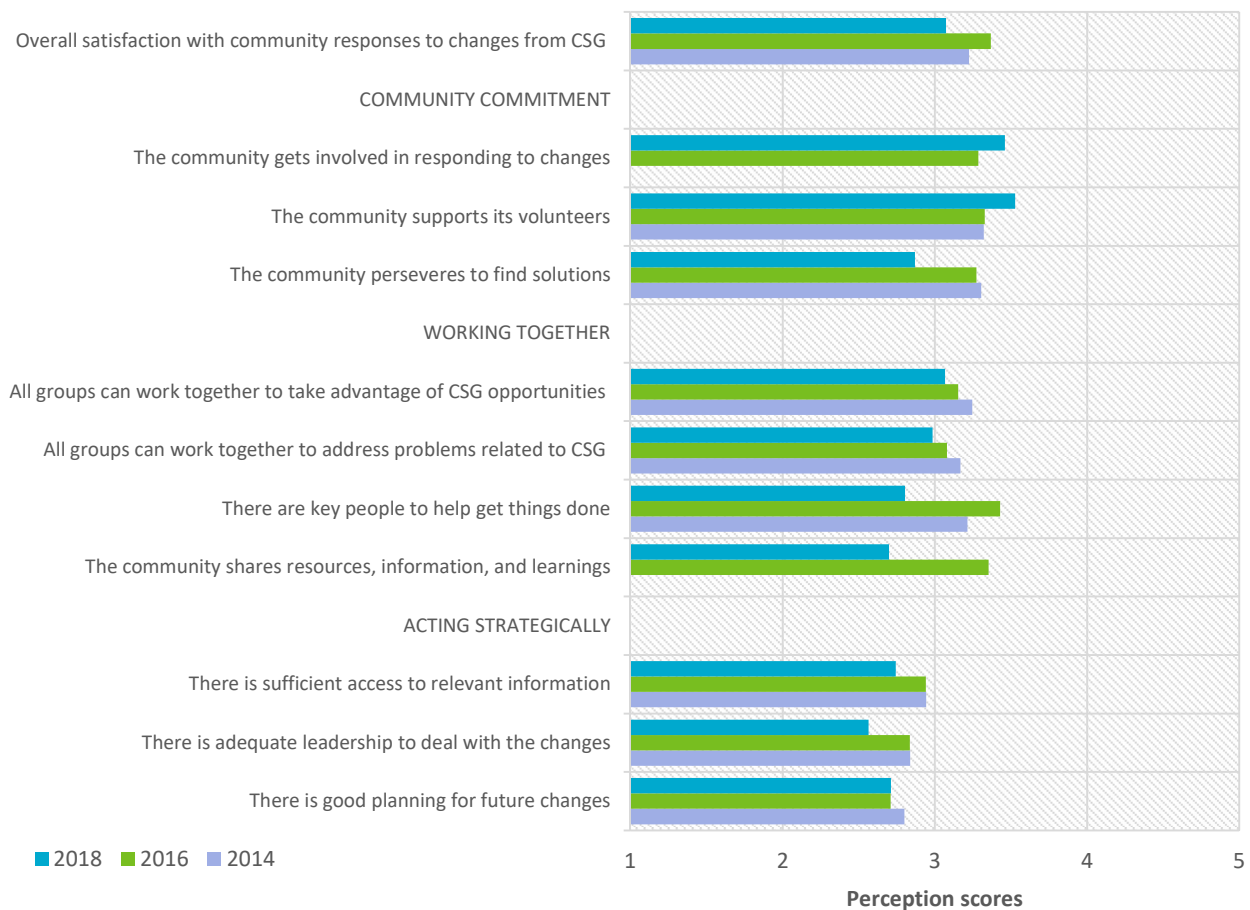
4.2 Community resilience actions

The survey asked questions about a range of community actions in relation to responding to changes from CSG activities in the region. Results showed a decline in perceptions that the community was responding strategically to the changes in terms of proactively planning for the future, adequate leadership for dealing with changes, and access to relevant information, which were all viewed unfavourably on average.

Similarly perceptions that local residents, businesses, government, and gas companies can work together to address any problems or take advantage of opportunities associated with CSG development had also lowered since 2014. In particular, residents had unfavourable views about the community being able to share its resources, information and learnings.

Figure 27 shows the downward trend in perceptions of most resilience actions except for perceptions of their community's commitment to getting involved and supporting its volunteers in responding to change.

Figure 27 Community perceptions of resilience actions in responding to CSG development: Western Downs, 2014, 2016, 2018



Note: Working together refers to local communities, a CSG company, local and state governments being able to work together; Scores: 1 = lowest and 5 = highest; scores below 3 indicate dissatisfaction and scores above three indicate satisfaction

4.3 Indicators of community coping and adapting to CSG development

Analyses identified a combination of factors that were linked to perceptions of community adapting and coping well with changes from CSG development. When the community felt these factors were functioning effectively then they also viewed their community as adapting and coping well. In contrast, if they believed these aspects were not strong then they viewed their community as not coping well with CSG activity.

Indicators of responding well to CSG development in 2018 were:

- ✓ Good sharing of information and working together on problems and opportunities (Working together)
- ✓ Good planning, leadership, and access to information (Strategic actions)
- ✓ Good community involvement and perseverance (Community commitment)
- ✓ The environment is being managed well for the future: underground water, nature reserves, farming land
- ✓ Good economic opportunities – businesses doing well and good employment options
- ✓ Effective local decision making processes and strong citizen voice - trust in local leaders and council, people feel listened to and heard, and that they are being kept informed
- ✓ Strong local trust, community cohesion, and community spirit
- ✓ Good environmental quality - low levels of dust and noise, and good air quality
- ✓ Satisfaction with services and facilities

Trends over 2014 – 2016 - 2018

When comparing these different components of high community functioning over time a number of factors were found to consistently contribute to adapting and coping. Table 8 shows these factors shaded in green, and the ticks show those factors moderately or highly correlated with community functioning in each year. Of note, income sufficiency was an important indicator in 2014 when construction was in full swing and 2016 when there was significant economic slowdown. Services and facilities were an important indicator during the operations phase, and roads during the construction phase. Details of the analyses used to identify the indicators for each year are found in Appendix C.

Table 8 Factors contributing to high community functioning: Western Downs: 2014, 2016, 2018

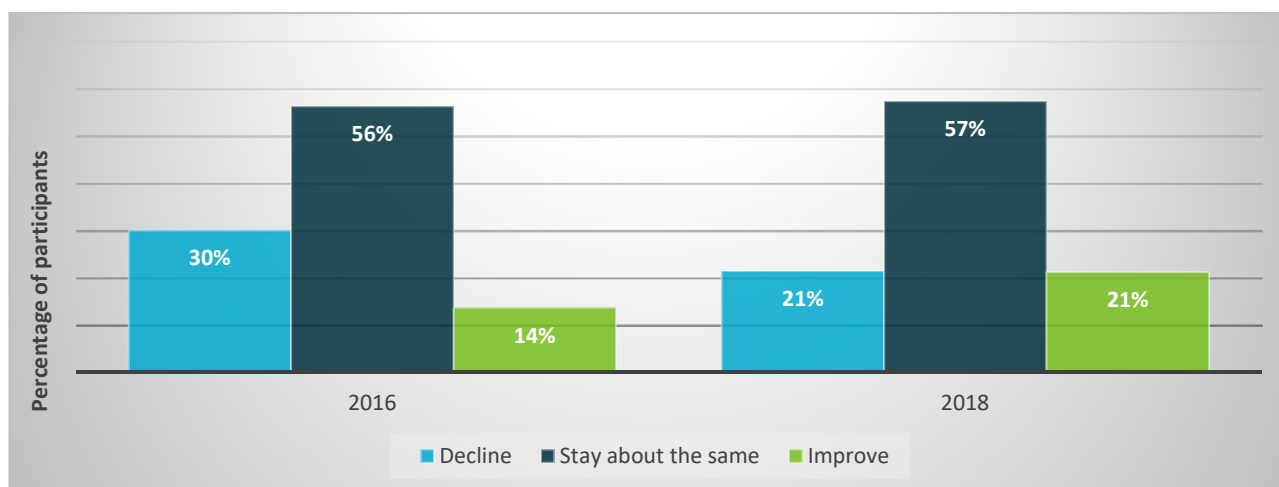
	Community functioning		
	2014	2016	2018
<u>Community resilience actions</u>			
Acting strategically	✓	✓	✓
Working together	✓	✓	✓
Community commitment	✓	✓	✓
<u>Community wellbeing dimensions</u>			
Local decision making	✓	✓	✓
Economic opportunities	✓	✓	✓
Environmental management	✓	✓	✓
Local trust	✓	✓	✓
Environmental quality	✓	✓	✓
Community spirit	✓	✓	✓
Community cohesion	✓		✓
Income sufficiency	✓	✓	
Services and facilities			✓
Roads	✓		

5 Expected future community wellbeing

In 2018, most people in the Western Downs expected future community wellbeing to be the same in three years' time (58% of residents) with equal numbers indicating they expect it to either decline (21%) or improve (21%). When compared to the eastern Maranoa, results were similar for both regions.

Interestingly, compared to 2016 there has been a statistical change in the percentage of people who felt their community would decline. As shown in Figure 28, in 2016, more people felt their community wellbeing would decline (30%) than improve (14%). However, in 2018 this had changed with improved optimism evident by an increase in those who felt their community wellbeing would improve in three years and a lowering of those who felt it would decline. This particular item was not included in the 2014 survey.

Figure 28 Expected future community wellbeing: Percentages of residents, Western Downs 2016 and 2018



Differences among subregions

In 2018, there were no significant differences across the subregions in expectations of future community wellbeing in three years times.

Differences between Out-of-town and In-town

There were also no significant differences based on whether a person lived in-town or out-of-town in expected future community wellbeing in the 2018 results.

5.1.1 UNDERLYING DRIVERS OF EXPECTED FUTURE COMMUNITY WELLBEING

Analysis showed that expectations of future community wellbeing were largely explained by three factors, and these were consistent predictors over the four years:

- perceptions of *current levels of community wellbeing*,
- perceptions of *resilience actions* - how well the community might respond to coal seam gas development, and
- the strength of a persons' *attachment to place*.

When community wellbeing and community resilience were perceived to be strong, then people held more positive views about the future wellbeing of their community. In addition, the stronger a sense of belonging and attachment to place the more positive a person is likely to feel about their community's future.

Attitudes and feelings about CSG development was a statistically significant predictor of expected future community wellbeing in 2014, but not in 2016 and 2018. Statistical details are found in Appendix C.

6 Attitudes and perceptions of CSG and the sector

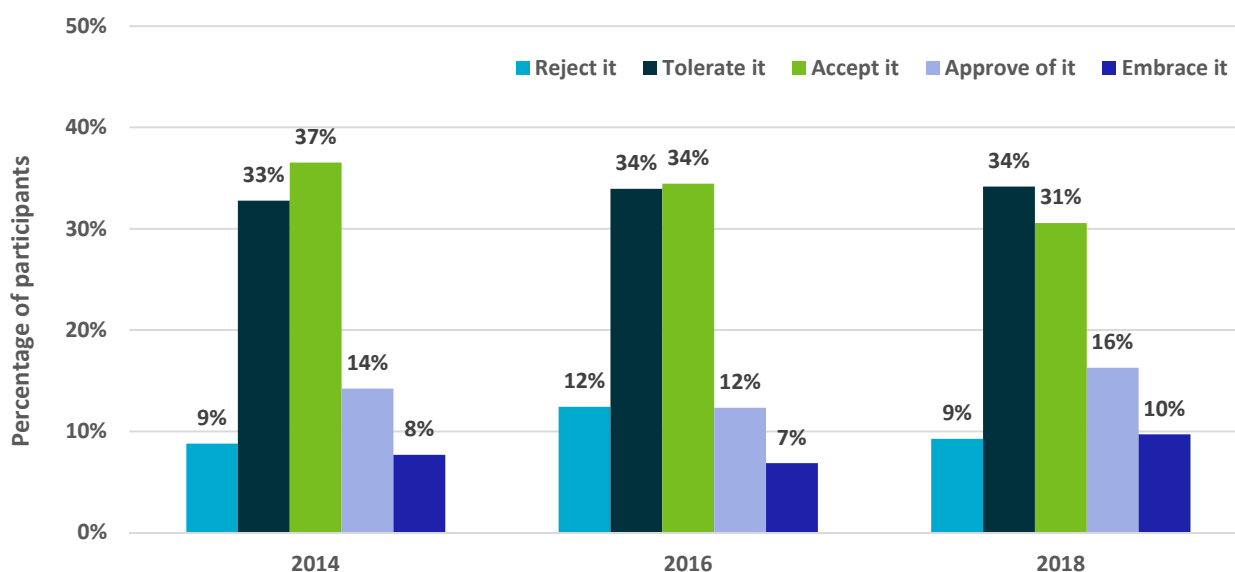
6.1 Attitudes towards CSG development

In 2018, attitudes towards CSG development within the region still ranged across a spectrum of views.

- 9% of people rejected CSG development
- 10% of people embraced CSG development
- 81% of people tolerated, accepted, or approved of CSG development
 - 34% tolerated
 - 31% accepted
 - 16% approved

As shown in Figure 29, this pattern has remained similar over time. In 2016, there was a slight shift towards more negative views, but in 2018 this trend reversed and acceptance levels increased at the more positive end of the spectrum.

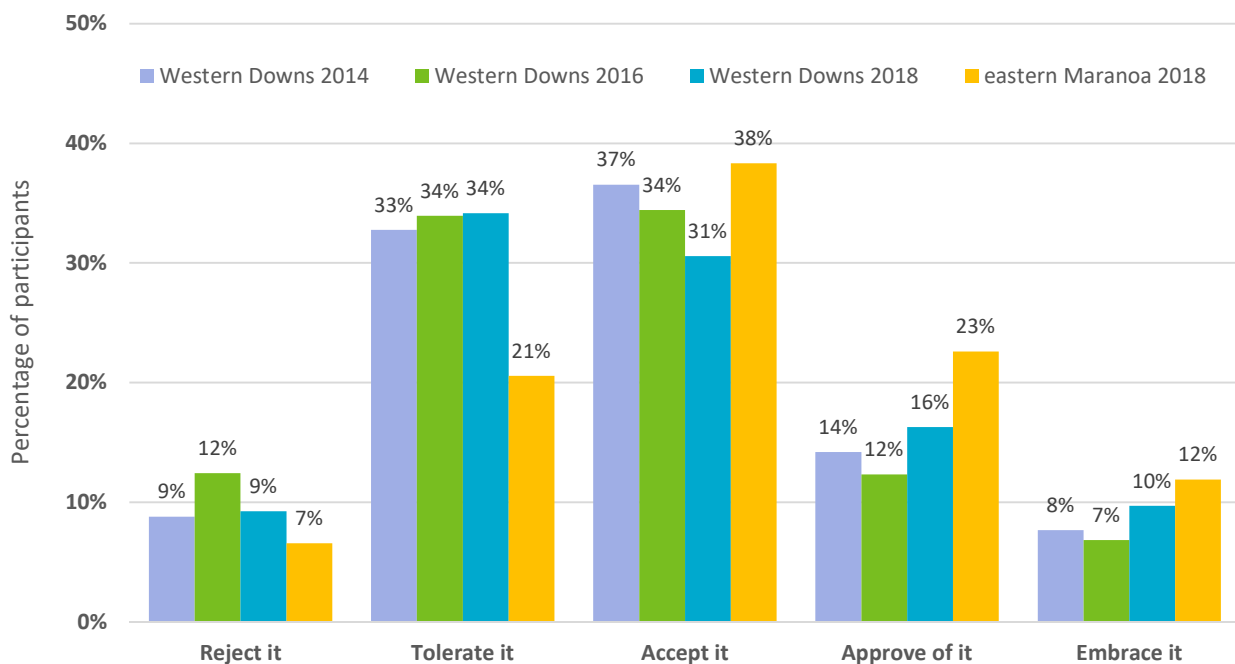
Figure 29 Attitudes towards CSG development in the Western Downs region: 2014, 2016, and 2018 – By Year



Note: Percentages rounded to the nearest whole percent

Figure 30 displays the same results but by attitude category, showing more clearly how each category of attitude has changed over time. It also demonstrates more favourable attitudes towards CSG development in the eastern Maranoa.

Figure 30 Attitudes towards CSG development in the Western Downs region: 2014, 2016, and 2018 – By attitude category including eastern Maranoa 2018

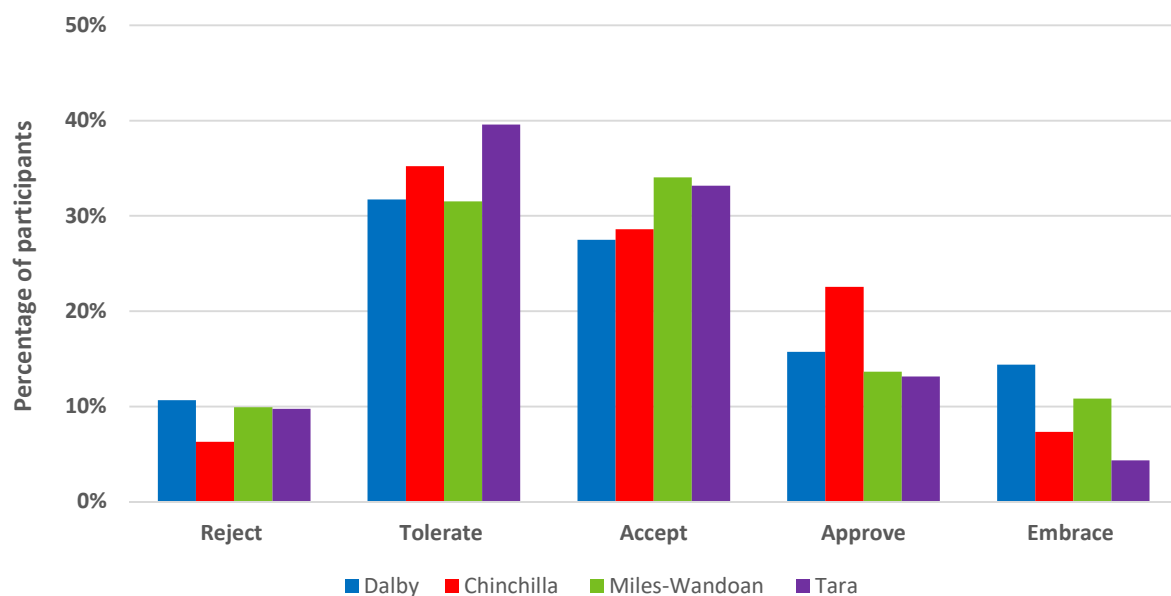


Note: Percentages rounded to the nearest whole percent

Differences among subregions

In 2018, people's views towards CSG development continued to differ slightly between towns. As shown in Figure 31, Dalby and Chinchilla had the highest percentages of residents with positive views towards CSG development while Tara had the highest percentages of residents with least favourable attitudes. Of the subregions in the Western Downs, Chinchilla consistently held the most positive views towards CSG development over 2014, 2016, and 2018.

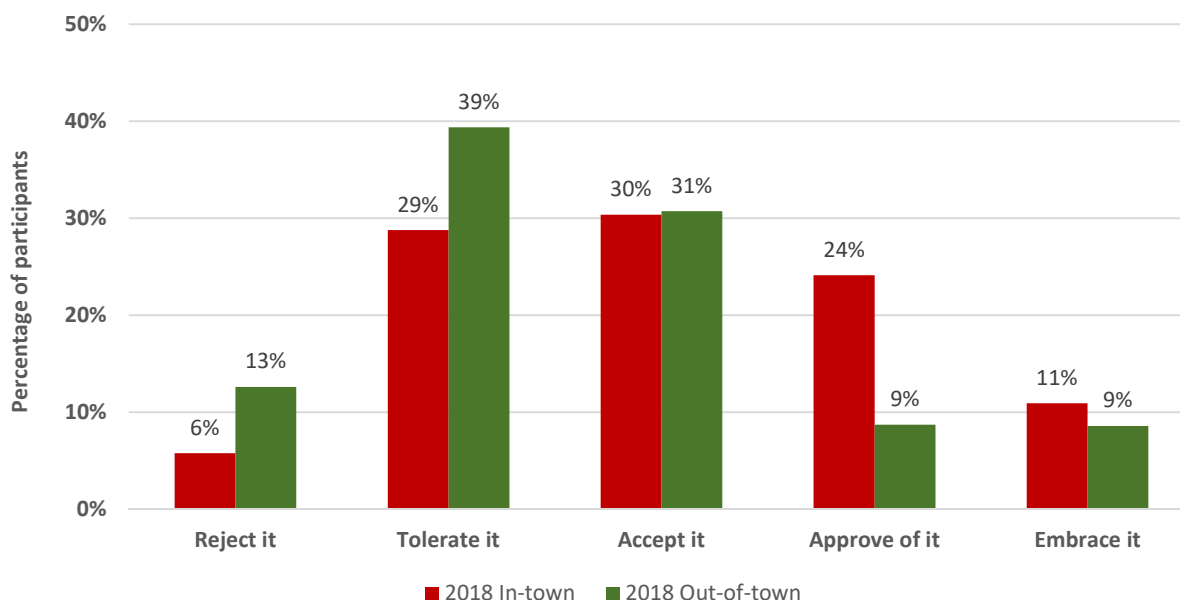
Figure 31 Attitudes towards CSG development 2018: Differences between subregions – Western Downs 2018



Differences between In-town and Out-of-town

There continued to be differences in attitudes towards CSG development between people who live in town and people who live out of town in 2018, with people who live in town statistically showing more positive views, as shown in Figure 32. This pattern was similar over 2014 and 2016. People in towns were slightly less favourable in their attitudes towards CSG development in 2016 than they were in 2014, and more favourable again in 2018, whereas people who lived out of town showed no real change over time.

Figure 32 Attitudes towards CSG development: In-town and Out-of-town – Western Downs 2018

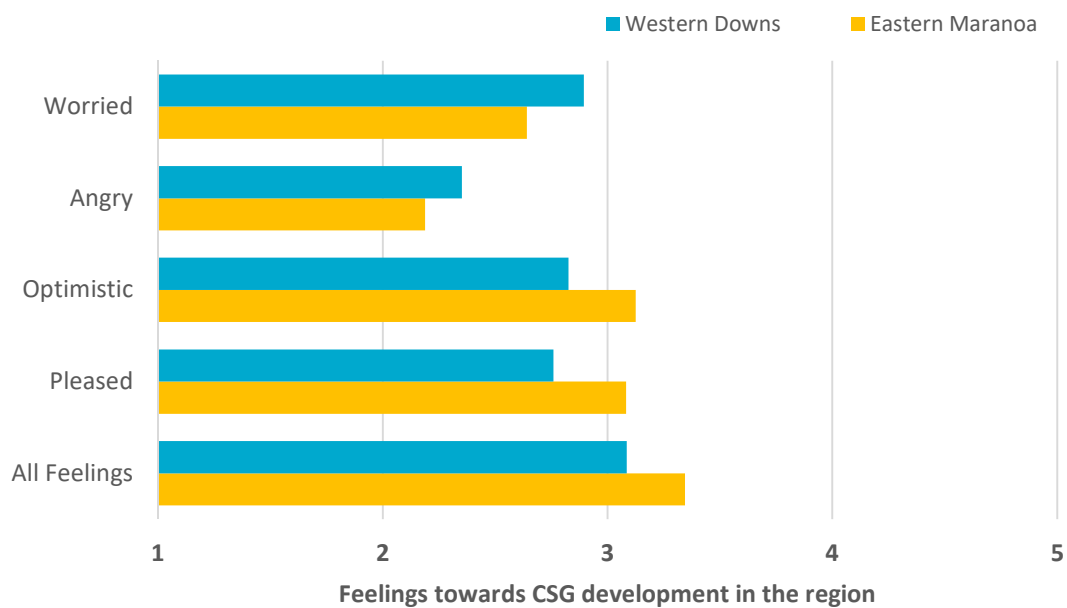


6.1.1 FEELINGS TOWARDS CSG DEVELOPMENT

Feelings towards CSG development were measured using measures of both positive and negative feelings. Two items measured positive feelings (feeling optimistic and feeling pleased) and two items measured negative feelings (feeling angry and feeling worried).

In 2018, people did not report strong feelings towards coal seam gas development. In the Western downs, feelings of worry, optimism, and being pleased with CSG development were all similar with feelings of anger reported as the lowest emotion. The eastern Maranoa showed statistically higher levels of positive feelings (optimism and pleased) and lower levels of worry than the Western Downs. In the eastern Maranoa, optimism was rated more highly than a sense of worry. Results are shown in Figure 33.

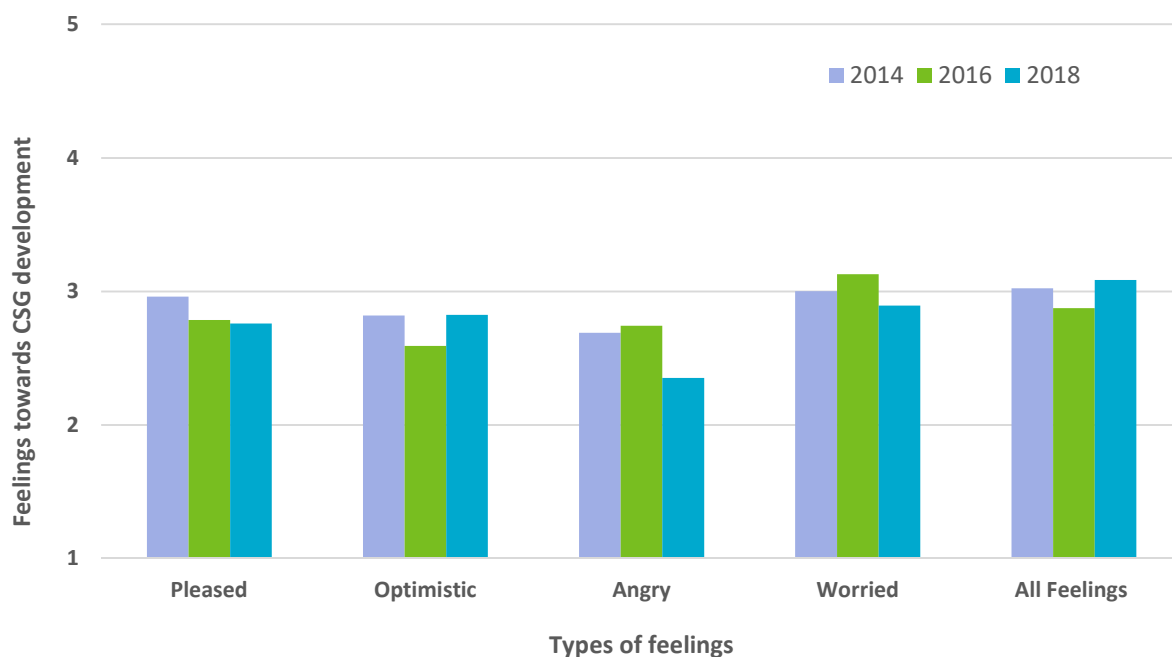
Figure 33 Feelings towards CSG development: Western Downs and eastern Maranoa, 2018



Note: 1 = strongly disagrees with the feeling towards CSG development (worried, angry, optimistic, pleased), 5 = strongly agrees with the feeling

Trends over the four years showed a general softening of negative emotions towards CSG development in the Western Downs, as shown in Figure 34. A sense of worry had lowered since 2016 ($M = 3.13$) to a borderline score in 2018 ($M = 2.90$) of not being worried on average. Similarly, people were less angry in 2018 compared to previous years. However, people did not report that they were more optimistic ($M = 2.83$) or pleased ($M = 2.76$) on average since 2014. Optimism was at its lowest in 2016 ($M = 2.59$).

Figure 34 Trends in feelings toward CSG development: Western Downs region, 2014, 2016, and 2018



Note: 1 = strongly disagrees with the feeling towards CSG development (worried, angry, optimistic, pleased), 5 = strongly agrees with the feeling

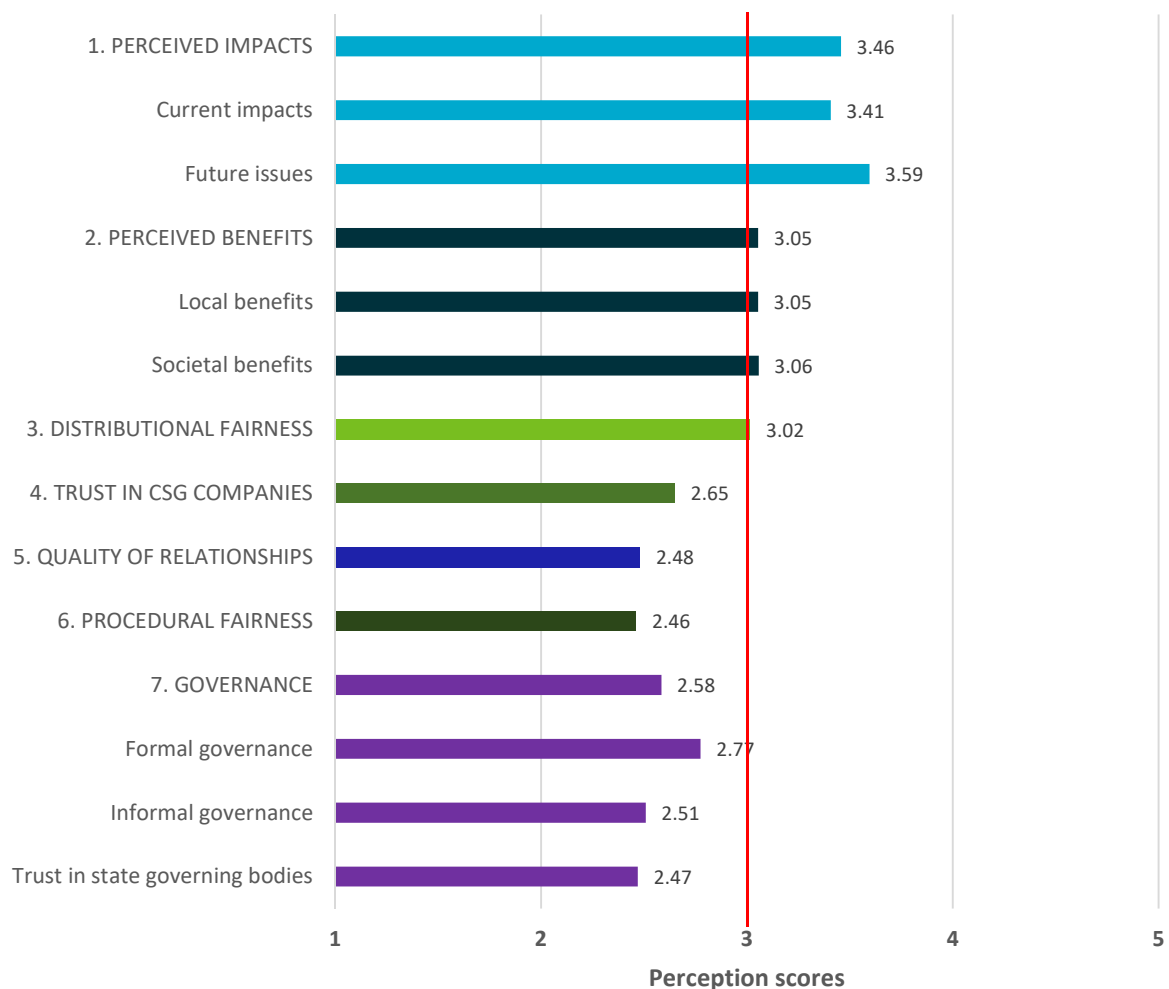
6.2 Perceptions about CSG development and the sector

In 2018, the survey measured perceptions of seven different factors identified as important to forming an overall view about CSG development. These included perceptions of *impacts* and *benefits*, *procedural* and *distributional fairness*, *governance*, *quality of relationships with industry*, and *trust in the industry*.

As shown in Figure 35, residents' concerns for future issues were moderately high and greater than perceptions of current impacts. Perceptions of benefits were borderline across the region although this varied within the subregions as discussed in the following section.

On average, perceptions of fairness, trust in CSG companies, and the relationship quality with the CSG company were generally negative. Perceptions of governance were also unfavourable, although people indicated more positive perceptions of governing bodies to regulate the industry and hold CSG companies to account (formal governance) than other aspects of governance such as trust. However, these perceptions also varied according to the subregion. Detailed graphs for each of the underlying factors are found in Appendix F with scores for each of the items provided.

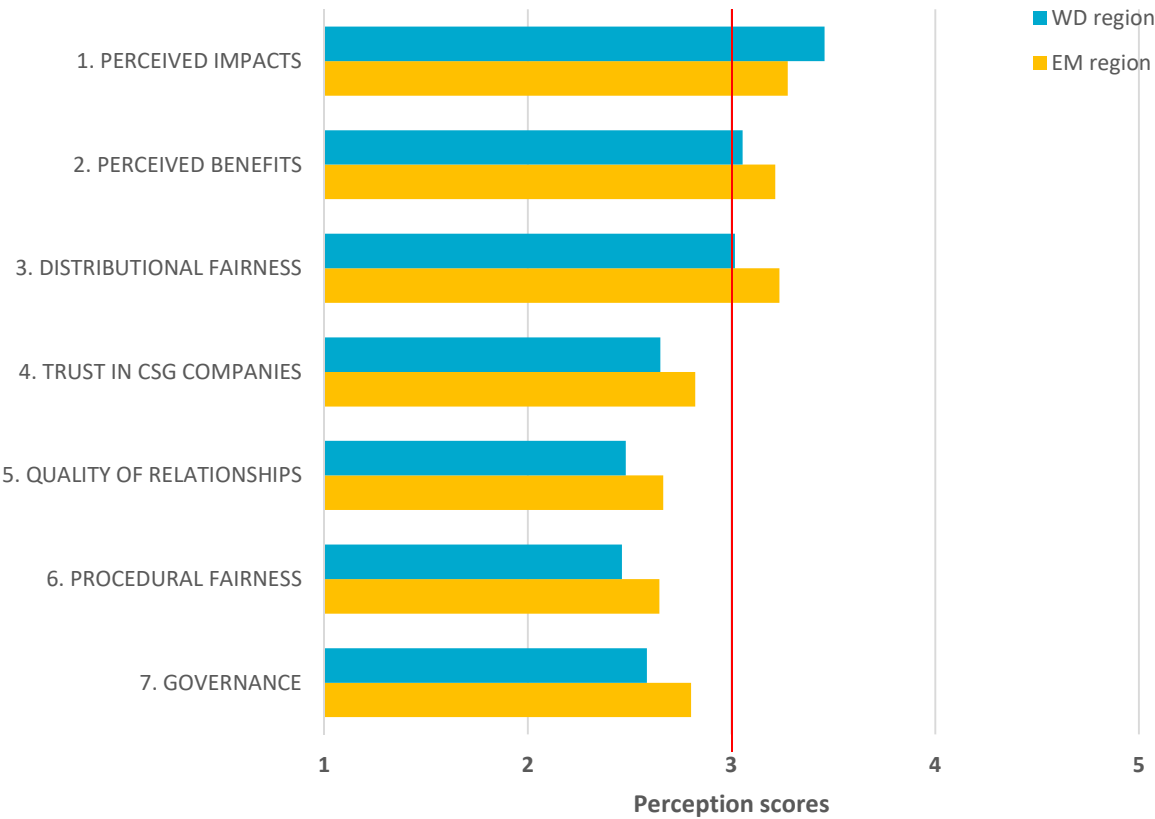
Figure 35 Perceptions of underlying factors important to acceptance of CSG development: Western Downs, 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores > 3 indicate favourable perceptions, scores < 3 indicate unfavourable perceptions except for perceived impacts where the higher the score the greater the level of concern

When compared to the eastern Maranoa, the Western Downs regions showed higher levels of concerns about impacts and less favourable views about benefits, fairness, trust in companies, relationship quality with companies, and governance, as shown in Figure 36.

Figure 36 Perceptions of underlying factors important to acceptance of CSG development: Western Downs and eastern Maranoa, 2018



Note: Scores: 1 = lowest and 5 = highest perception; scores < 3 indicate unfavourable perceptions, scores > 3 indicate favourable perceptions except for perceived impacts where the higher the score the greater the level of concern

Differences among subregions

Perceptions of the different underlying factors varied across the region in 2018; however there was a consistent pattern showing that the larger centres of Dalby and Chinchilla had more positive views about benefits, fairness, quality of relationships with the CSG companies, and governance. Dalby also perceived the impacts of CSG development to be lower than the other subregions. The eastern Maranoa, comprising the larger centre of Roma, also showed more positive views about the sector and less concerns about the impacts. See Figures 37 – 41.

All subregions viewed impacts similarly in that they were more concerned about future issues, such as CSG development extending into more farming areas and less concerned about current impacts.

In relation to benefits, all subregions had similar views as to the societal benefits of CSG development (such as CSG contributing to the energy supply of Australia, the wider Australian economy, and acting as a transition fuel between coal and renewables). However when it comes to local benefits it appears that different subregions experience local benefits differently. Results for Miles-Wandoan indicate negative perceptions of local benefits on average, whereas the larger centres of Dalby and Chinchilla report positive perceptions of local benefits.

Perceptions of the quality of relationships with CSG companies and the consequent trust that participants have of companies were all viewed negatively on average across all subregions, with scores falling below the midline of 3. The smaller centres of Miles-Wandoan and Tara indicated the lowest levels of trust in CSG companies.

Procedural fairness was also viewed quite negatively across all the subregions. However, perceptions of distributional fairness were positive on average in the larger centres of Dalby, Chinchilla and Roma, though negative in the smaller centres of Tara and Miles-Wandoan. Distributional fairness includes beliefs that their community receives a fair share of benefits, and that CSG development is fair if people are compensated accordingly including the local council.

Trust in governing bodies that oversee CSG was low on average for all sub-regions. However, people had more positive views about formal governance, which includes regulations and regulators holding CSG companies to account and that CSG companies comply with regulations, and land access agreements.

Figure 37 Perceptions of impacts 2018

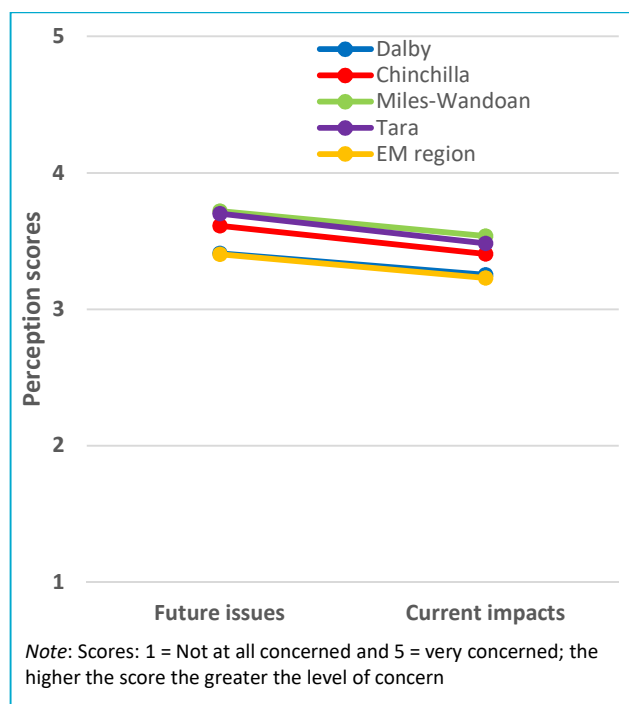


Figure 38 Perceptions of benefits 2018

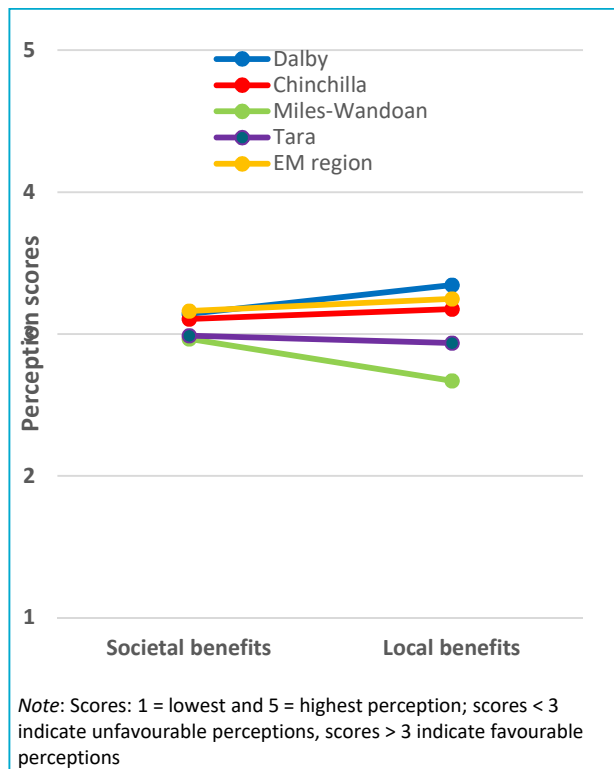


Figure 40 Perceptions of governance 2018

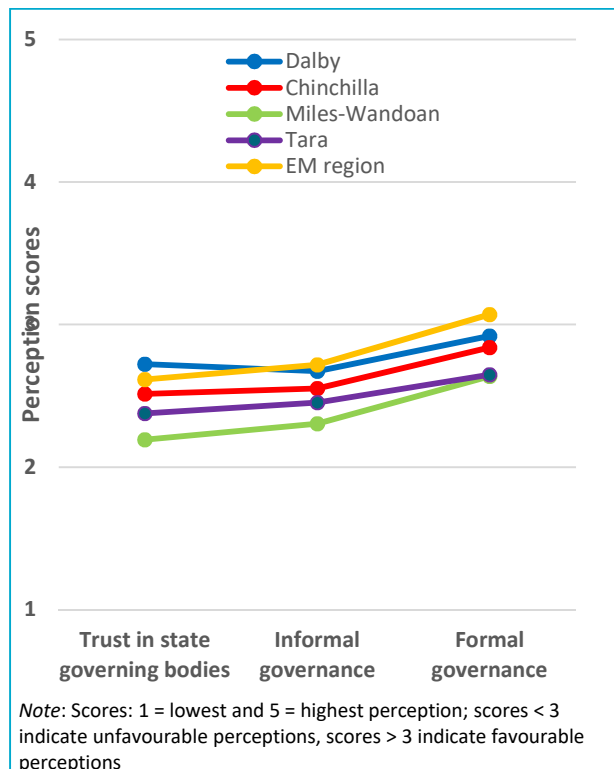


Figure 39 Perceptions of relationship quality and trust

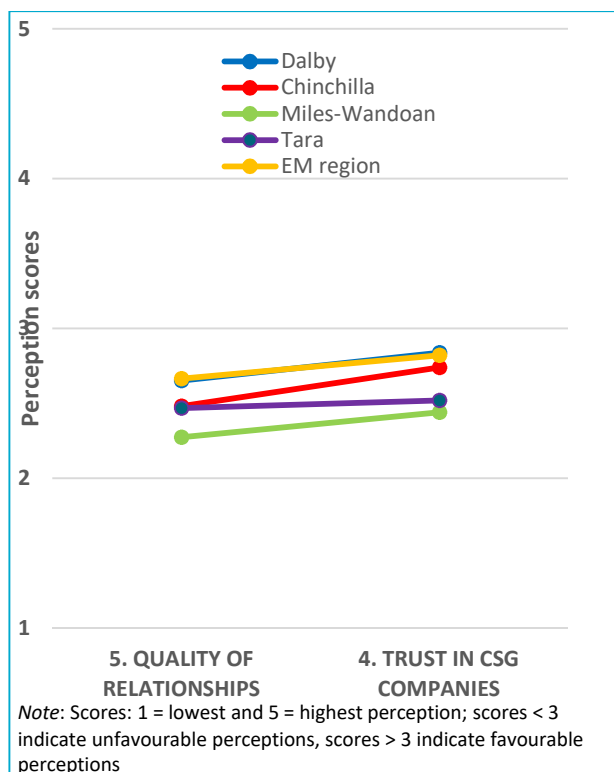
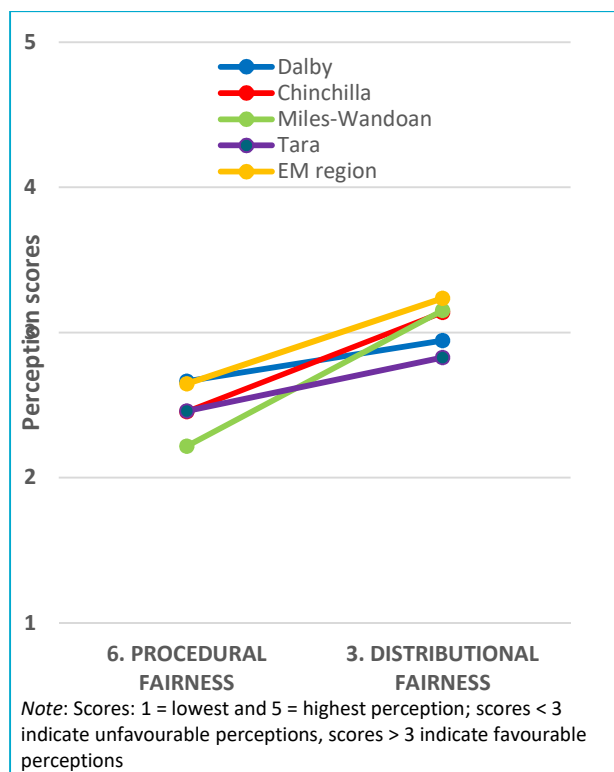


Figure 41 Perceptions of fairness



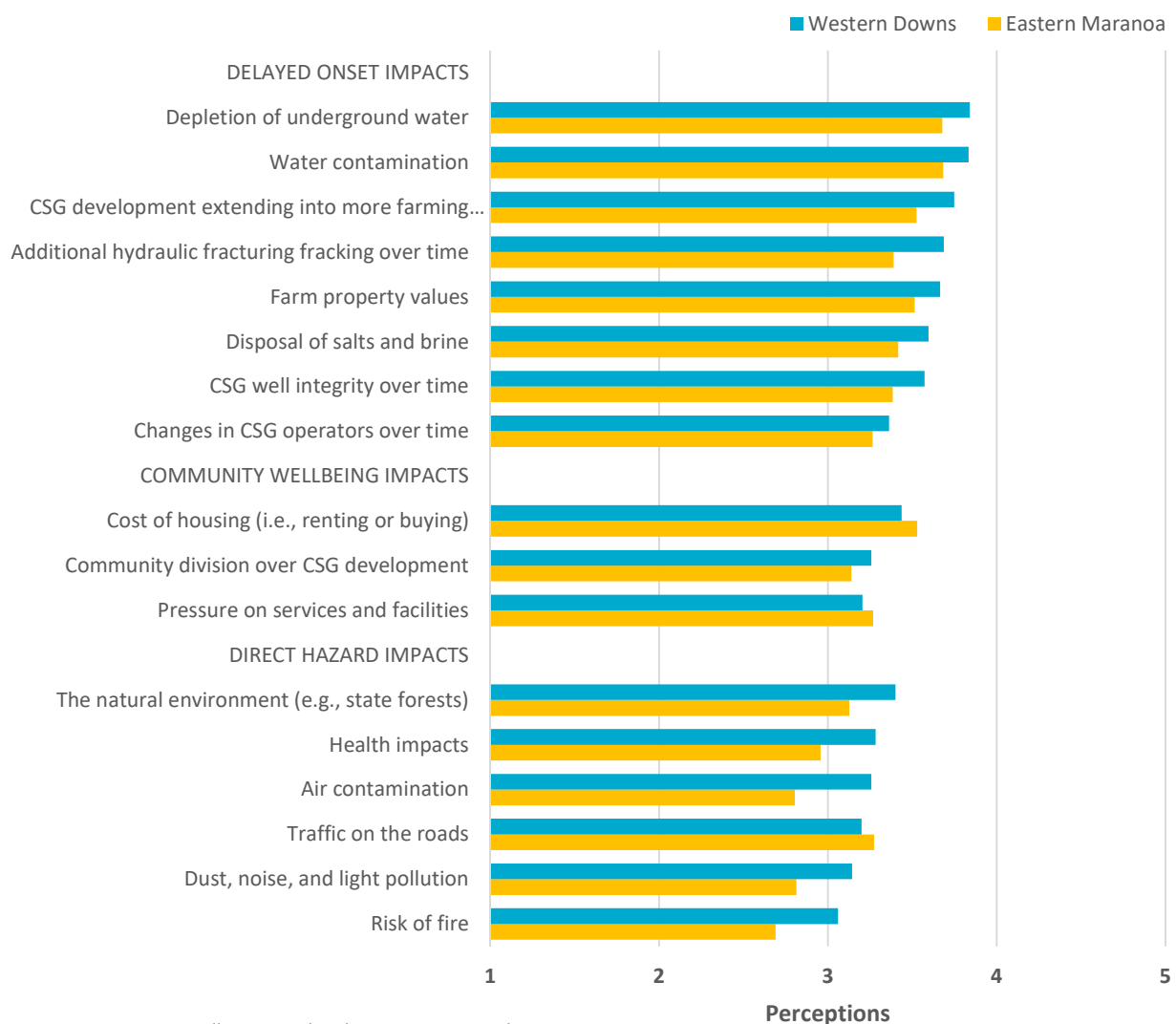
6.2.1 PERCEIVED IMPACTS

The top two concerns or perceived impacts related to underground water depletion and water contamination. The least concerning impacts related to risk of fire, and dust and noise pollution. Statistical analysis showed that the impacts can be grouped into three different types:

- *Delayed onset impacts:* Impacts that have a longer time horizon such as concerns about underground water, impacts on farming values, and CSG well integrity over time
- *Community wellbeing impacts:* Impacts that affect social infrastructure such as cost of housing, pressure on services and facilities, and community division over CSG development
- *Direct hazard impacts:* Impacts that more directly affect the environment and which may pose risks to residents, such as air contamination, traffic on roads, dust and noise pollution, and health.

When comparing the Western Downs to the eastern Maranoa, the Western Downs participants rated all impacts as more concerning than eastern Maranoa with three exceptions – impacts on housing, pressure on services and facilities, and the traffic on roads. Interestingly, in the eastern Maranoa, four impacts were rated less than 3 out of five indicating that on average these impacts were not concerning to the community. These included health impacts, air contamination, dust, noise, and light pollution, and the risk of fire. See Figure 42.

Figure 42 Perceived impacts about CSG development: Western Downs and eastern Maranoa, 2018

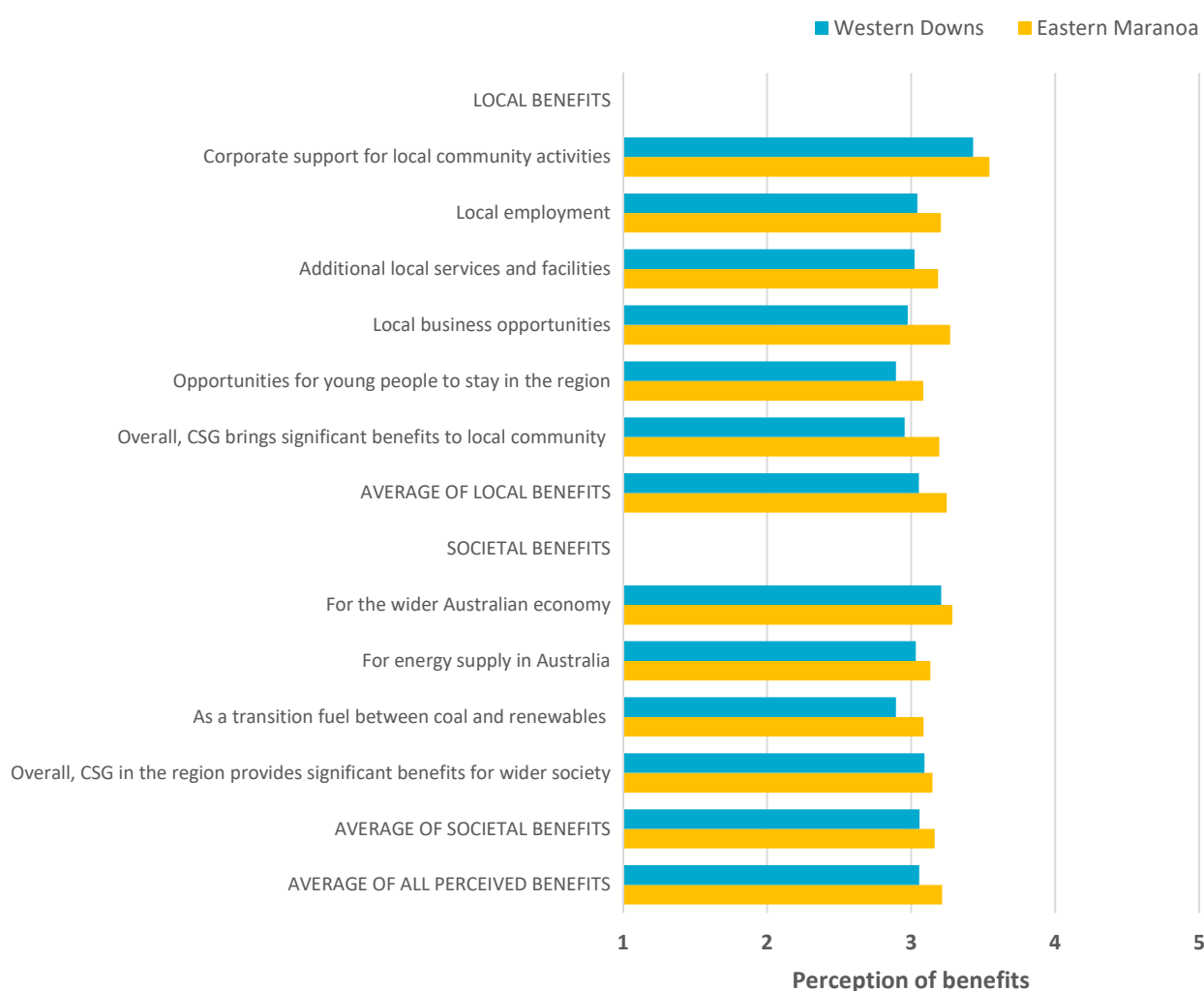


6.2.2 PERCEIVED BENEFITS

When considering the benefits from CSG development, people viewed the local benefits similarly as the benefits CSG can deliver to society. Even though perceptions of all benefits from CSG development were only modest across the Western Downs region ($M = 3.05$) it was the benefits that corporate support provides to local communities ($M = 3.43$), such as support for local clubs, and the benefit that CSG in the region provides to the wider Australian economy ($M = 3.21$) that were viewed most favourably.

When comparing the Western Downs to the eastern Maranoa, the eastern Maranoa participants rated all benefits more favourably than participants from the Western Downs. As shown in Figure 43, the biggest difference between the two regions was the perceived benefit to local business opportunities, where the eastern Maranoa rated these benefits quite favourably ($M = 3.27$) whereas the Western Downs rated these as borderline on average ($M = 2.98$).

Figure 43 Perceived benefits from CSG development: Western Downs and eastern Maranoa, 2018



Note: 1 = Strongly disagrees it is a benefit - 5 = Strongly agrees it is a benefit

6.2.3 PERCEPTIONS OF GROUNDWATER RISK MANAGEABILITY

Impacts to groundwater from water contamination or depletion of water quantity were the two impacts that caused the greatest level of concern to residents in both the Western Downs and the eastern Maranoa regions. Peoples' concerns were underpinned by beliefs that the risks are potentially catastrophic, not manageable, not understood by science, and poorly understood by the community. Farm owners held these views more strongly than people who do not own a farm.

A factor analysis showed that perceptions of manageability and understanding go together. However, regression analyses show that perceived risk severity is a more important driver of people's concerns about ground water depletion and contamination. Figure 44 shows the percentage of people holding each of these views.

Figure 44 Perceptions of risk to groundwater from CSG activities: Western Downs and eastern Maranoa, 2018

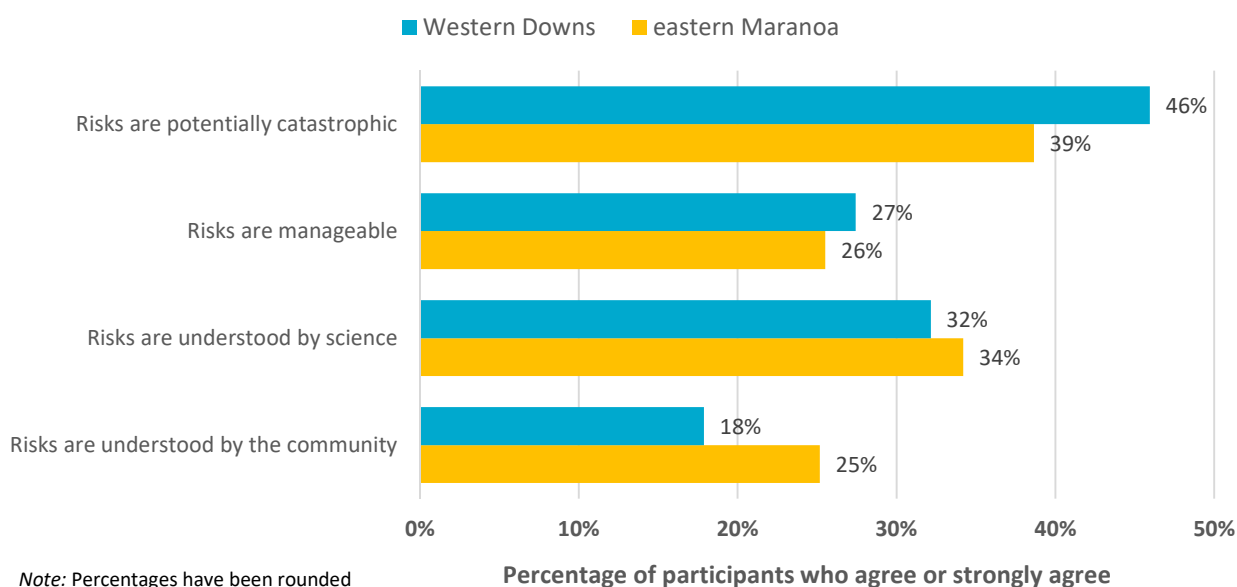
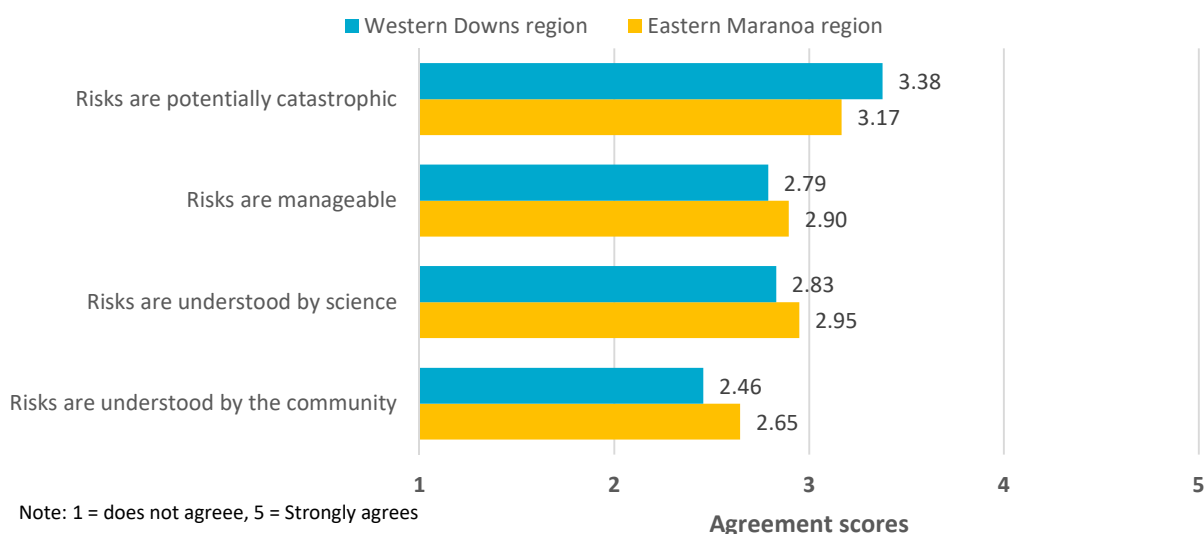


Figure 45 shows the average perception scores for each of the items and that people's perceptions of risks as manageable, understood by science, and understood by the community are low (< than 3 out of 5).

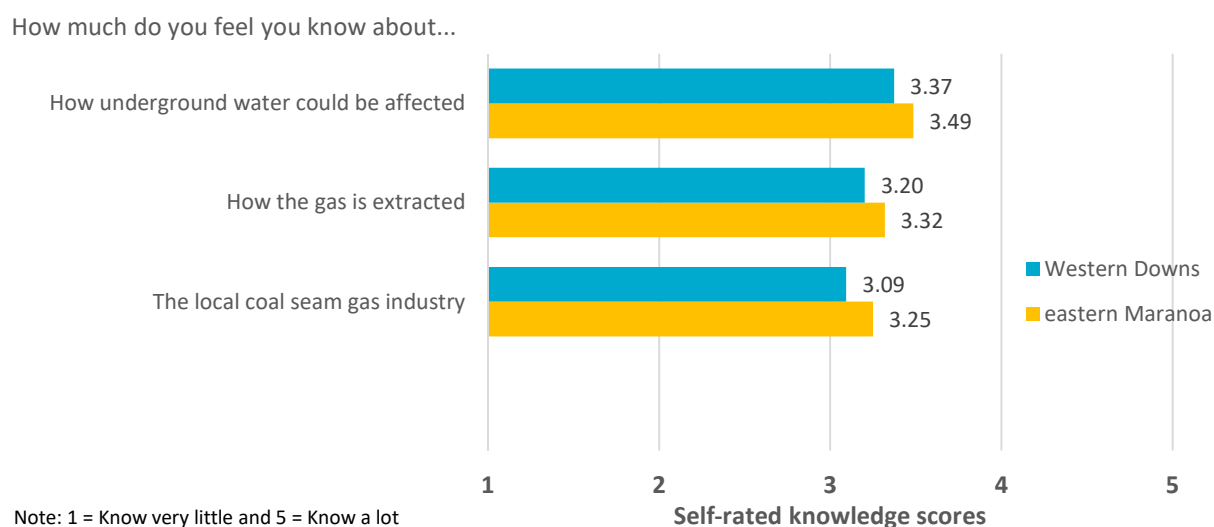
Figure 45 Mean scores of perceptions of risk to groundwater from CSG activities: Western Downs and eastern Maranoa, 2018



7 Knowledge, information, and previous experience

The survey measured self-rated knowledge about CSG using three items, asking people to rate how much they feel they know about: the local gas industry; how gas is extracted; and how underground water could be affected. In the Western Downs, people gave similar scores for all three items and indicated only modest levels in their confidence of knowledge about CSG. As shown in Figure 46, scores indicated they knew the least about the local gas industry ($M = 3.09$) and the most about how underground water could be affected ($M = 3.37$), using a response of 1 = I know very little to 5 = I know a lot. The eastern Maranoa participants also demonstrated a similar pattern though slightly more knowledge confidence than those from the Western Downs.

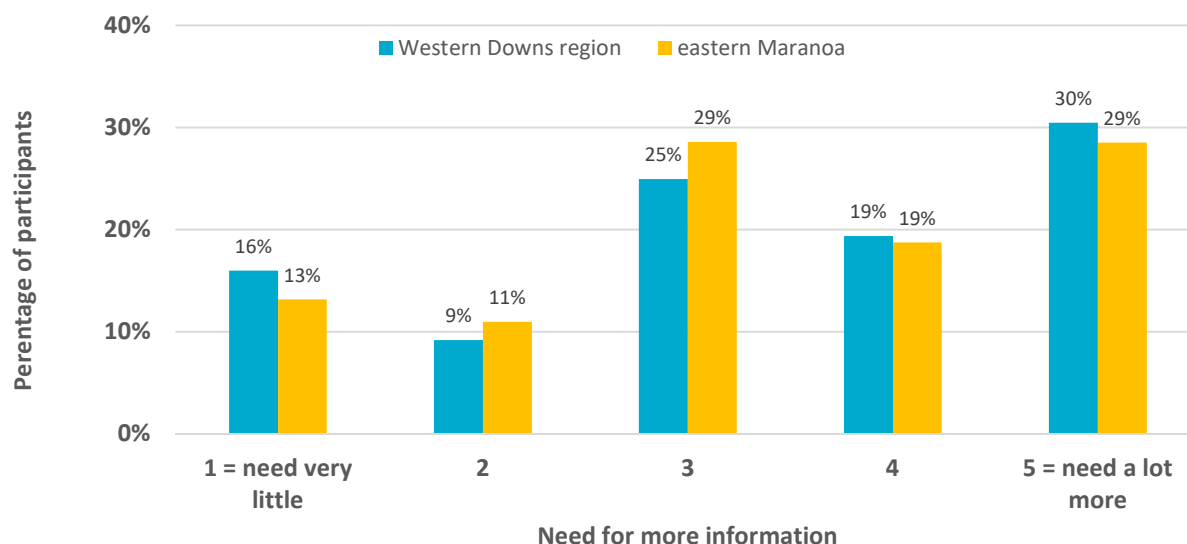
Figure 46 Self-rated knowledge scores about coal seam gas: Western Downs and eastern Maranoa, 2018



Need for more information

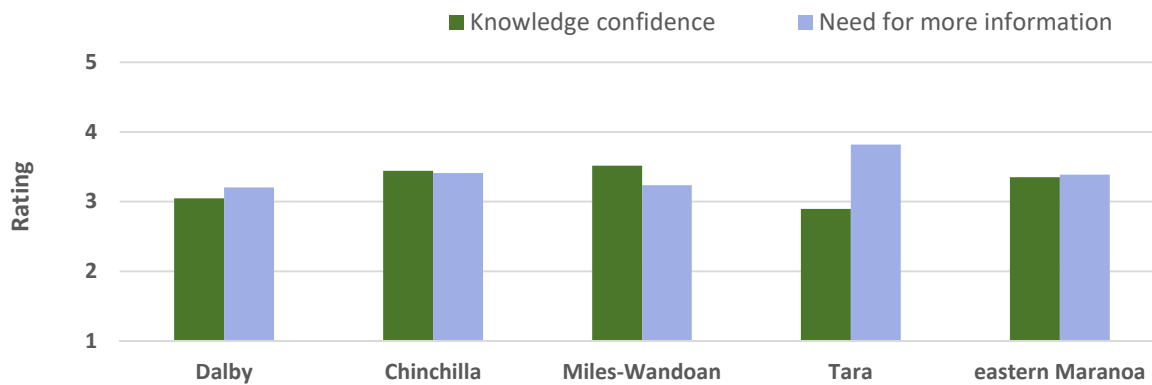
Participants were also asked about their need for more information about the local CSG industry. In the Western Downs, more than half the participants indicated they felt they needed more information about the CSG industry. This was similar in the eastern Maranoa, as shown in Figure 47.

Figure 47 Need for more information about the local CSG industry: Western Downs and eastern Maranoa, 2018



When this was assessed for subregions, it showed that Tara and surrounds had the greatest need for more information, as well as the lowest level of confidence in their knowledge of the industry. See Figure 48.

Figure 48 Knowledge confidence and need for more information: By subregion, 2018



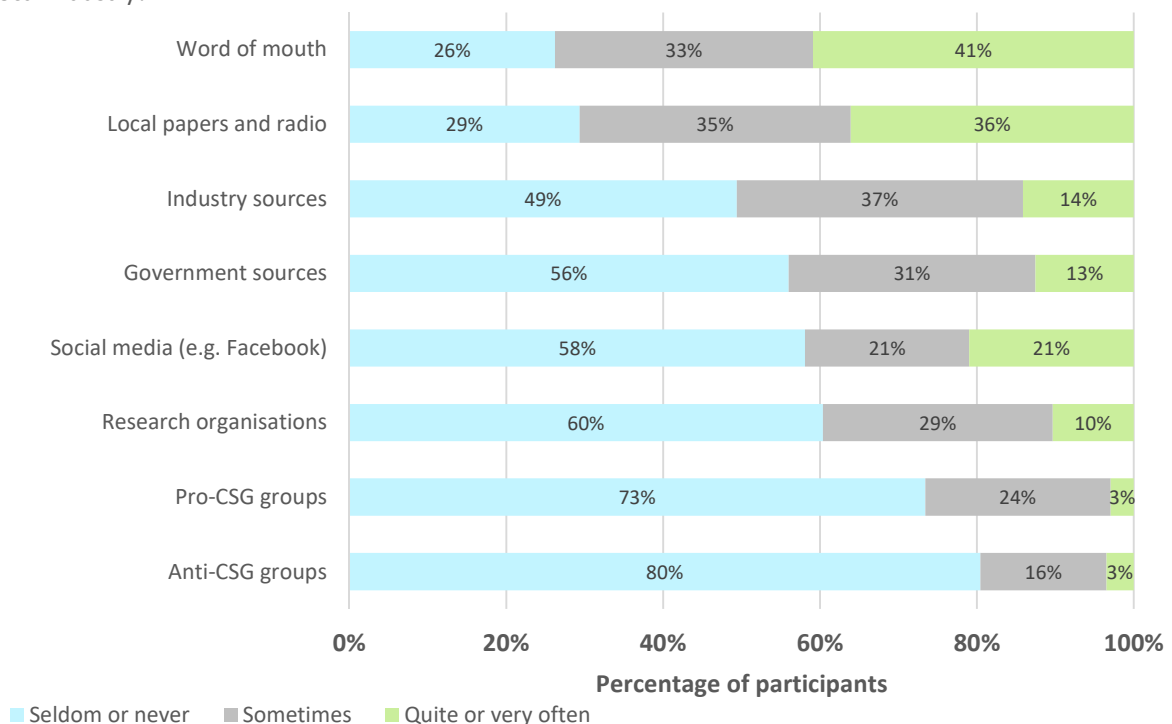
Note: The higher the score the greater the confidence in knowledge and the greater the need for information

Sources of information

The survey investigated how often people seek information about the CSG industry from various sources. Figure 49 shows that the most frequently used sources were word of mouth, and local papers and radio. The least used sources were from anti-CSG and pro-CSG groups. This pattern was similar for the eastern Maranoa.

Figure 49 Frequency of seeking information from different sources: Western Downs 2018

How frequently do you use the following information sources to get your information about the local industry?



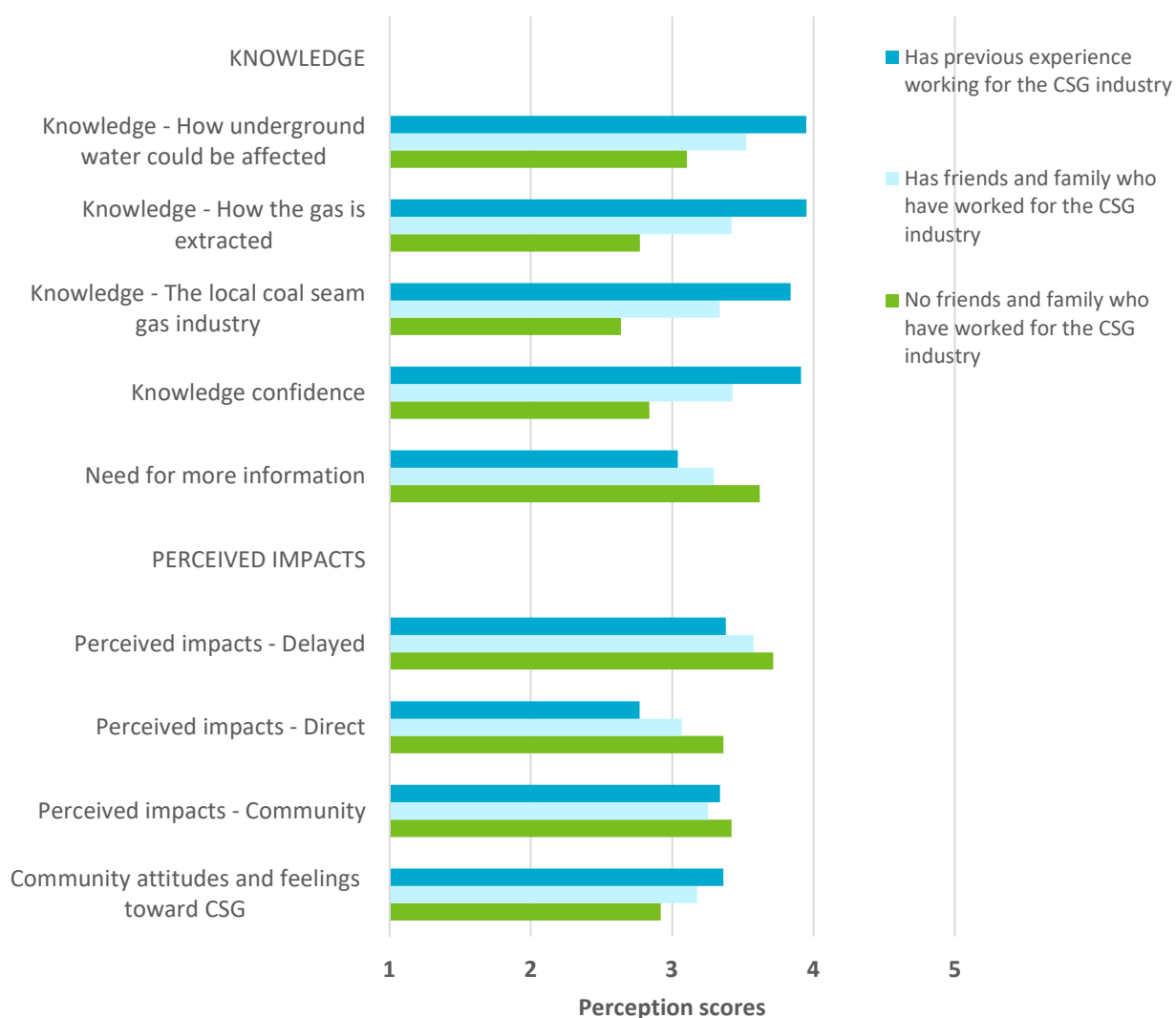
Previous experience with the CSG industry

People's previous experience with the CSG industry varied among participants. Many participants knew friends or had family who had worked in the industry, particularly in the eastern Maranoa region (81%) and less so in the Western Downs region (68%). Fewer people reported having worked for the CSG industry in some capacity, either directly for a CSG company or indirectly providing services for a CSG company (Western Downs 21% and eastern Maranoa 33%).

Previous experience with the CSG industry was linked to people's perceptions of their knowledge about the industry, their need for more information, their perceptions of impacts, and their attitudes towards CSG development. As shown in Figure 50, people with previous experience with the industry reported higher levels of knowledge about the industry, lower need for more information, lower levels of concerns about direct impacts (such as impacts on air quality, water quality, fire risks, and health impacts), and held more positive attitudes about the industry.

Note: All differences are statistically different ($p < .05$) except for perceived community impacts and perceived delayed impacts

Figure 50 Differences in knowledge and perceptions of impact based on previous experience with the CSG industry: 2018



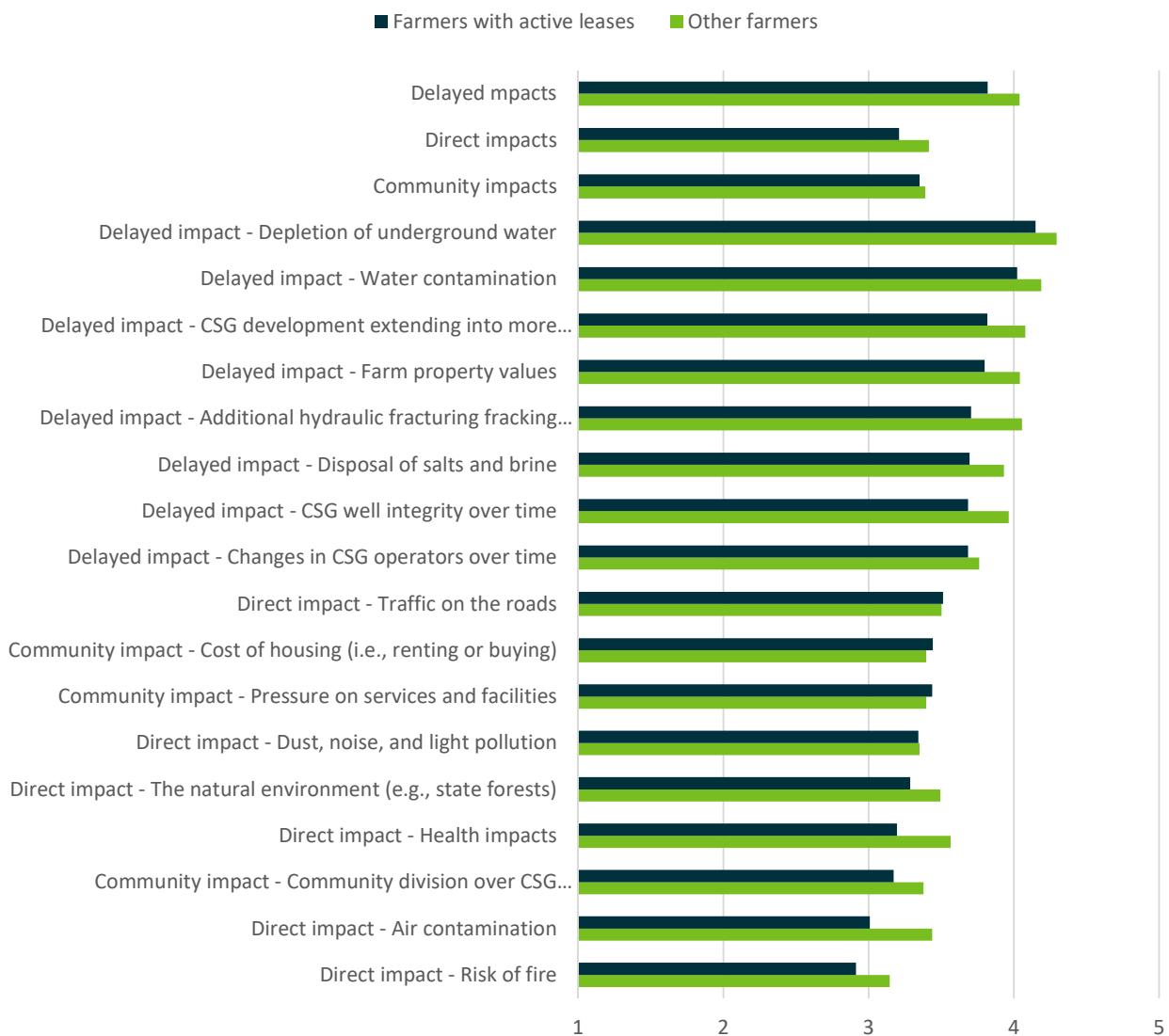
Note: The higher the score the greater the confidence in knowledge, the greater the need for information, the greater the concern about impacts, and the more positive the attitudes towards CSG development

8 Farm ownership and active CSG leases

In 2018, 26% of farmers who responded to the survey had active CSG leases on their properties, that is, the farms either had operating wells in place or negotiations for exploration or production of CSG had occurred.

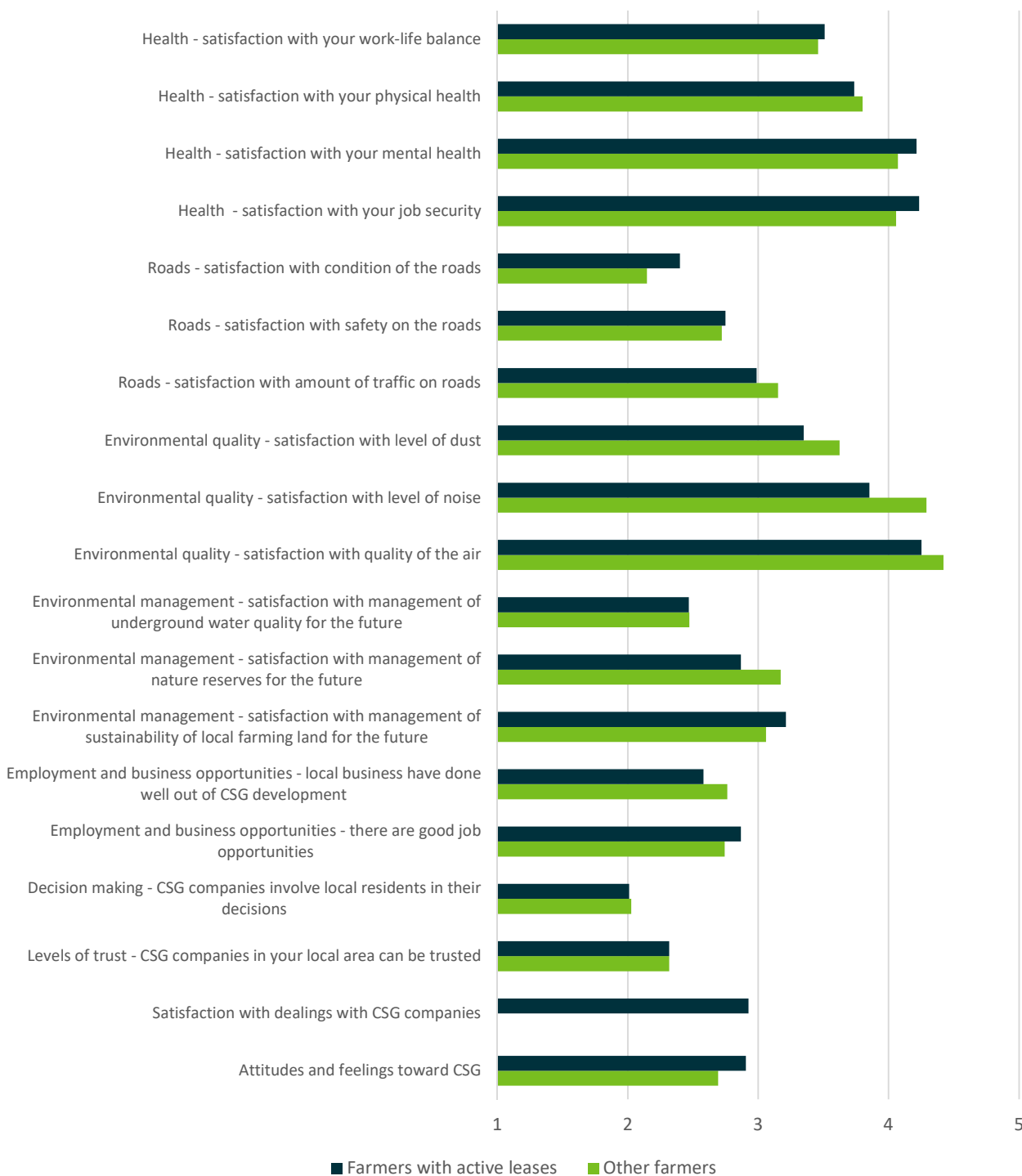
Results showed that farmers with active leases tended to have lower concerns than other farmers, although these differences were not significantly different statistically except for concerns about air quality. The lack of statistical difference in many instances is likely due to smaller sample sizes for farmers with active leases. Other farmers also demonstrated higher levels of concern for delayed impacts, such as concerns about well integrity over time, impacts on property values, and the possibility of CSG extending into other farming areas, than for current or direct impacts such as the impact on air quality, dust and noise pollution, or the risks of fire. Results are shown in Figure 51.

Figure 51 Perceptions of impacts: Farmers with active leases and other farmers, 2018



Results also showed no real differences in selected items of community wellbeing measures (those that measured individual aspects of wellbeing). See Figure 52.

Figure 52 Comparison of selected wellbeing and perception items related to CSG activity: Farmers with active leases and other farmers

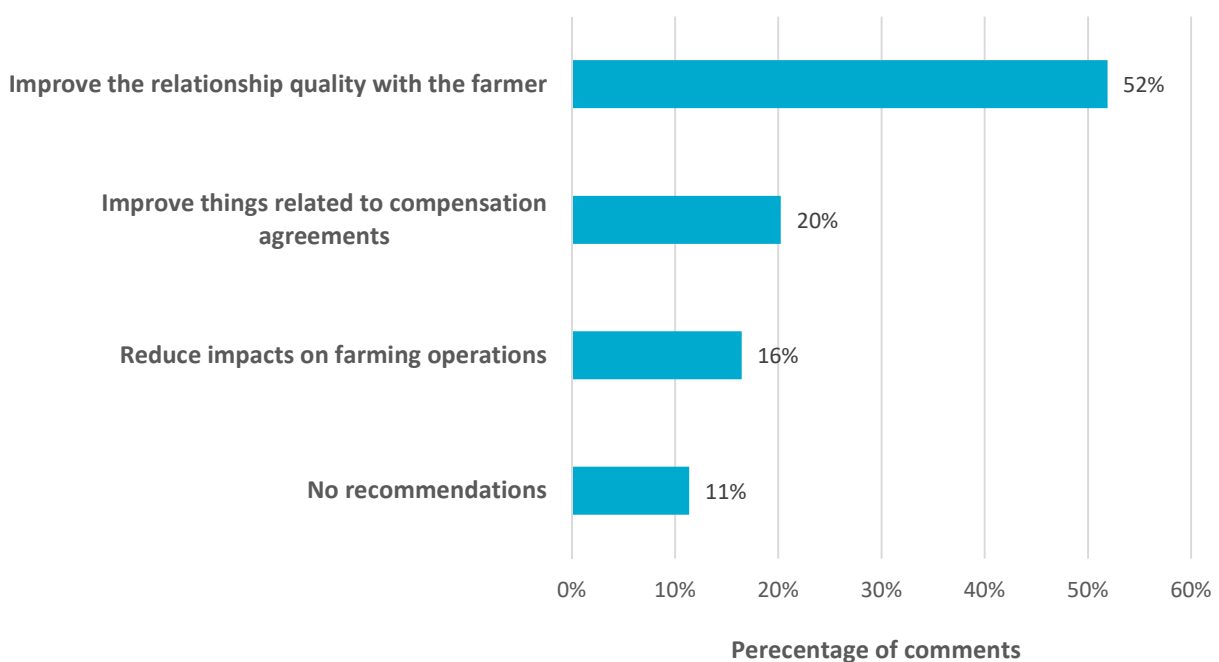


8.1.1 SUGGESTIONS FOR IMPROVEMENTS

In 2018, the survey asked farmers with active leases on their property (n=58) what would be one thing they would like improved in their dealings with CSG companies. This was an open-ended question and analyses showed the responses could be grouped into four types of responses, as shown in Figure 53.

- The most frequent responses were suggestions for improvements in the quality of the relationship between the farmer and CSG company (52% of responses), such as CSG companies keeping their word, treating the farmer with respect, and keeping them in the loop of information.
- The second most frequent set of responses were suggestions related to compensation agreements (20% of responses). These included improved levels of compensation, to recognise the value of farmer's time and sticking to the agreements.
- A third group of suggestions related to reducing impacts on farming operations (16% of responses) such as providing more information about the 'bigger picture' to enable future planning, and taking responsibility for water bores and weed issues.
- The smallest group made no recommendations (11% of responses) indicating that things were going pretty well and no further improvements needed, or simply no suggested improvements.

Figure 53 Suggested improvements made by farmers with active leases regarding their dealings with CSG companies



9 Comparisons with other surveys

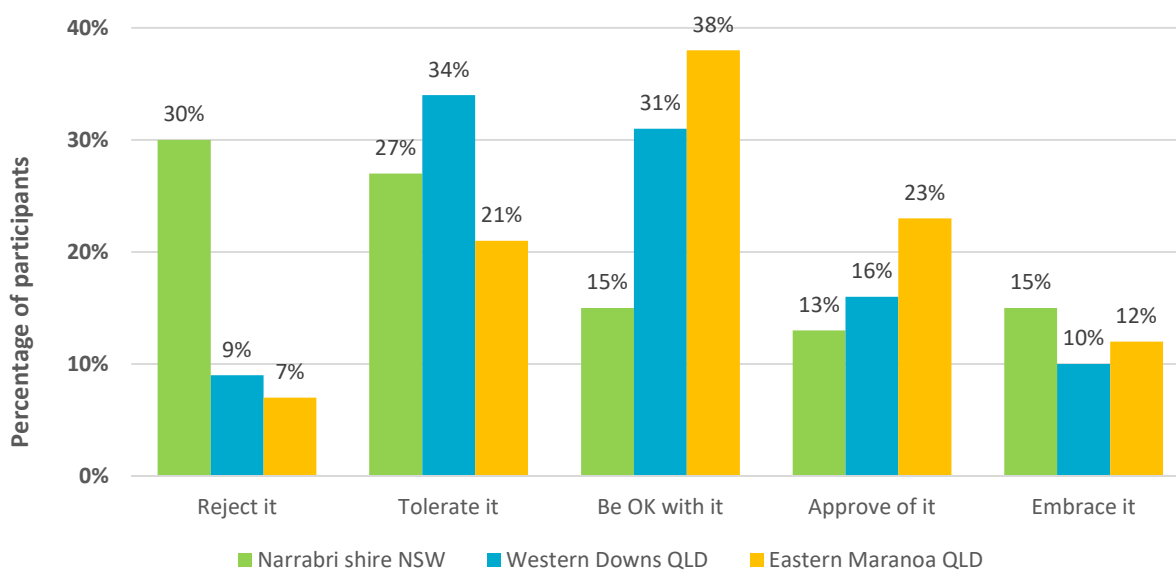
9.1 Comparisons with Narrabri

In February 2017 similar data about attitudes and perceptions of CSG development were collected from a sample of residents from the Narrabri shire, New South Wales. The Narrabri survey asked questions in relation to a proposed CSG development in the region, similar to that currently being considered by the New South Wales government. Comparisons of Narrabri perceptions with the Western Downs and eastern Maranoa regions are included in the following sections to contrast a region prior to CSG development, with a region in the early operations phase of development (Western Downs), and a region with a longer history of CSG activity (eastern Maranoa).

9.1.1 ATTITUDES TOWARDS CSG DEVELOPMENT

Results show attitudes towards CSG development are most positive in the eastern Maranoa region and least positive in the Narrabri shire. In 2018, the eastern Maranoa, which includes Roma and surrounds indicated the highest proportion of some acceptance (93%) at least tolerating CSG development, followed by the Western downs region (91%) and then the Narrabri shire (70%). Figure 54 shows the biggest difference is the proportion of residents in the Narrabri shire indicating they reject CSG development (30%) compared to Western Downs (9%) and eastern Maranoa (7%).

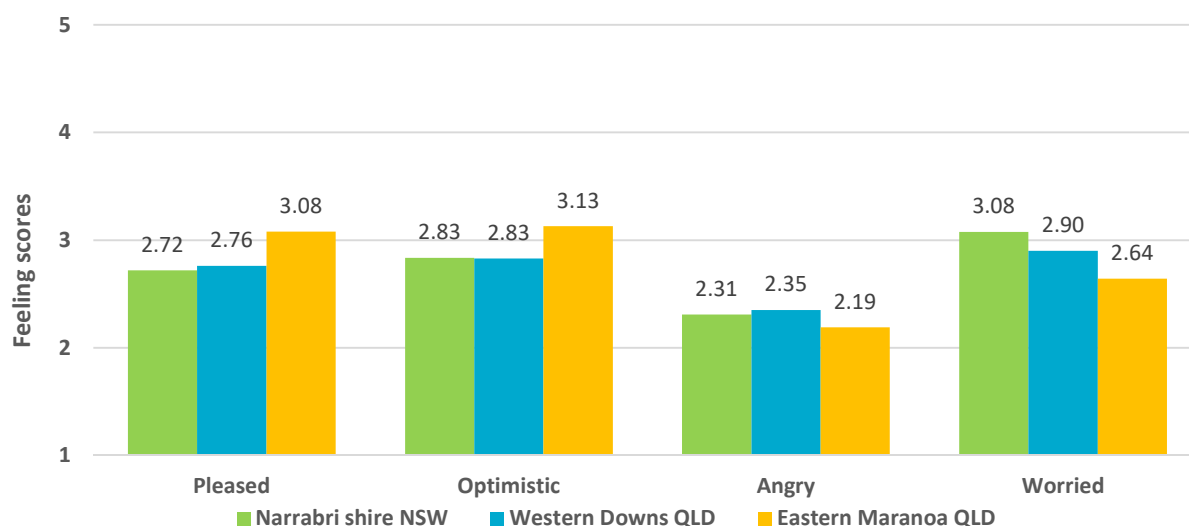
Figure 54 Attitudes towards CSG development: Western Downs 2018, eastern Maranoa 2018, and Narrabri 2017



9.1.2 FEELINGS TOWARDS CSG DEVELOPMENT

Results show that the eastern Maranoa region holds more positive feelings towards CSG development than Narrabri and Western Downs. People from the eastern Maranoa feel more pleased, more optimistic, less angry, and less worried about CSG development than Narrabri and Western Downs. Figure 55 shows that feelings toward CSG development for Narrabri and the Western Downs were similar, though Narrabri residents were more worried.

Figure 55 Feelings towards CSG development: Western Downs 2018, eastern Maranoa 2018, and Narrabri 2017



9.2 Comparisons with the CSIRO Australian Attitudes toward Mining survey (2017)

9.2.1 TRUST IN CSG COMPANIES AND CSG GOVERNING BODIES

Items related to trust in CSG companies and trust in state government were compared with very similar items from the CSIRO Australian Attitudes towards Mining survey (Moffat et al., 2017), which incorporates CSG extraction into its definition of mining. As shown in Table 9, results show that people in Australia generally hold low levels of trust towards CSG and mining companies and the state bodies responsible for governing CSG and mining activities. However, the eastern Maranoa showed higher levels than the national average with respect to trust in CSG companies to act responsibly. The Narrabri region showed the highest levels of trust in state government bodies. In contrast, the Western Downs results showed lower levels of trust in state government and CSG companies.

Table 9 Trust in companies and state government comparisons: Western Downs, eastern Maranoa, Narrabri, and the Australian Attitudes towards Mining survey

Item		CSIRO Western Downs 2018	CSIRO eastern Maranoa 2018	CSIRO Narrabri Shire survey 2017	Australian Attitudes ¹ Survey 2016-17
Trust the (CSG / Mining) company to act responsibly	Trust in companies	2.78	2.98	2.86	2.78
Trust the (CSG / Mining) company to act in the (community's / society's) best interests	Trust in companies	2.48	2.62	2.62	2.58
Trust the (State government bodies / State government) to act responsibly	Trust in state government	2.57	2.73	3.18	2.60
Trust the (State government bodies / State government) to act in the (community's / society's) best interests	Trust in state government	2.36	2.53	3.09	2.59

Note: ¹ Attitudes are from mining regions in Australia where 'mining' includes unconventional gas

9.2.2 PROCEDURAL AND DISTRIBUTIONAL FAIRNESS

Three fairness items were also compared with very similar items from the Australian Attitudes to Mining survey (Moffat et al., 2017). Table 10 shows that views relating to procedural fairness were slightly less favourable in the three CSG regions than for residents in other mining regions within Australia. However, there was less difference in how distributional fairness was viewed.

Table 10 Comparison with Australian Attitudes towards Mining survey: Procedural, distributional fairness

Item		CSIRO Western Downs 2018	CSIRO eastern Maranoa 2018	CSIRO Narrabri Shire survey 2017	Australian Attitudes ¹ Survey 2016 -17
The mining industry listens to and respects community opinions	Procedural	2.48	2.72	2.61	2.78 ²
The mining industry is prepared to change its practices in response to community concerns	Procedural	2.42	2.55	2.66	2.87 ²
Mining communities receive a fair share of the benefits from mining	Distributional	3.09	3.15	2.93	2.99 ²

Note: ¹ Attitudes are from mining regions in Australia where 'mining' includes unconventional gas; ² this result has been statistically adjusted from its original reporting on a 7-pt scale to reporting here on a 5-pt equivalent scale using methods according to Colman et al. (1997).

9.2.3 GOVERNANCE

As shown in Table 11, overall perceptions of governance in the three CSG regions and the Australian average for mining regions were all unfavourable, even though Narrabri residents thought the state government (e.g., EPA) could hold industry accountable on average. Perceptions around governance were less favourable in the Western Downs region compared to the eastern Maranoa region and the Narrabri Shire, though they were all higher than the Australian average for perceived informal governance, which was particularly low.

Table 11 Comparison with Australian Attitudes towards Mining survey: Informal, formal governance

Item		CSIRO Western Downs 2018	CSIRO eastern Maranoa 2018	CSIRO Narrabri Shire survey 2017	Australian Attitudes ¹ Survey 2016 -2017
State government listens to and (respects / responds to) community concerns	Informal governance	2.47	2.58	2.58	2.14 ²
Legislation and regulation can be counted on to ensure mining companies do the right thing	Formal governance	2.52	2.74	2.88	2.84
The state government (EPA) is able to hold the mining industry accountable	Formal governance	2.65	2.97	3.16	2.74

Note: ¹ Attitudes are from mining regions in Australia where 'mining' includes unconventional gas; ² this result has been statistically adjusted from its original reporting in a 7-pt scale to reporting here in a 5-pt scale using methods according to Colman et al. (1997).

10 Explaining trust and social acceptance of the CSG sector

10.1 Underlying drivers of social acceptance

Perceptions of nine key factors were identified as the important drivers of trust and social acceptance determining the level of social acceptance, or lack thereof, in the CSG sector.

These included perceptions of:

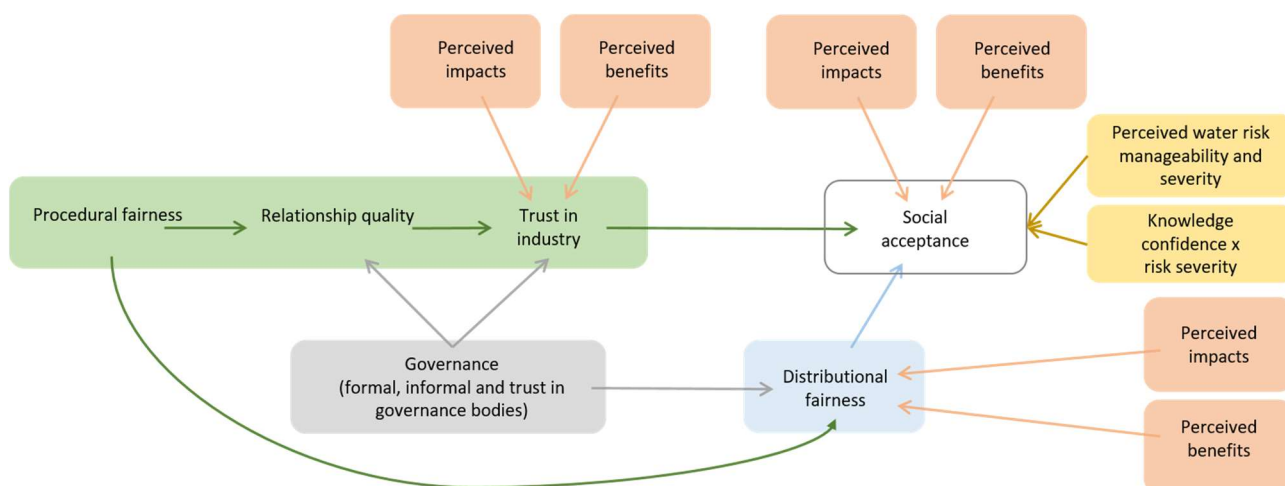
- Benefits
- Impacts
- Distributional fairness
- Trust in CSG companies
- Quality of relationship with CSG companies
- Procedural fairness
- Governance
- Distributional fairness
- Perceptions of water risk manageability and severity
- Confidence of knowledge about CSG combined with beliefs about risk severity

10.2 A model of trust and social acceptance in the CSG sector

Statistical modelling of the nine key factors showed how the different factors can work together to best explain trust and levels of acceptance, as shown in Figure 56. The model shows opportunities for building trust and increasing acceptance by improving the key drivers that influence and shape trust and acceptance. Appendix C details specific statistics.

The relationships between all these factors were positive except for perceived impacts, which demonstrated negative relationships. A positive relationship means that when a person perceives one variable to be high they are more likely to perceive the corresponding variable to also be high. In contrast, a negative relationship means that when a person perceives one variable to be high they are more likely to perceive the other variable to be low.

Figure 56 Model of trust and social acceptance or lack thereof



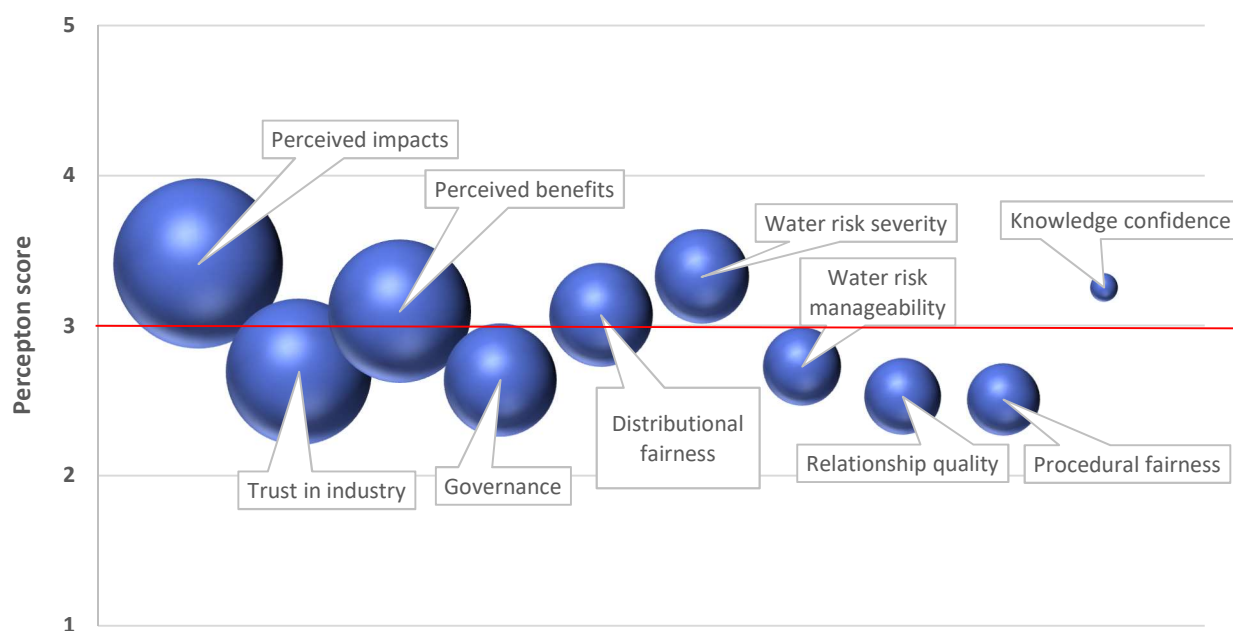
Note: The impact of knowledge confidence depends on a person's beliefs about water risk severity

10.3 Explaining how the model works

The main points in the model are:

- Perceived impacts is the main driver of acceptance or lack thereof
- Perceived impacts and benefits both act directly on acceptance
- Perceived impacts and benefits also act indirectly to influence acceptance via distributional fairness and trust in the industry.
 - This means perceived impacts and benefits contribute to people's perceptions of how much they trust the CSG industry and how much they believe it is fair in terms of how costs and benefits are distributed and shared.
- Good governance of the industry supports relational aspects between communities and the CSG operator and beliefs about distributional fairness.
 - This means compliance, regulations, planning, and trust in CSG governing bodies all shape people's views of how much they trust industry and how fair they believe it is for their community
- Perceived risks to underground water directly impact social acceptance, both in terms of how manageable and how severe people believe the risk to be
- People's confidence in their knowledge has complex though a small influence on acceptance. The influence of knowledge is not straightforward. It depends on their beliefs about water risk severity.
 - For example, when people were confident in their knowledge AND believed the risks to be severe they were less accepting. Alternatively, when people were confident in their knowledge AND believed the risks were ok they were more accepting of CSG development.
- The model demonstrates that people's trust and acceptance of the industry is dependent on a range of factors. Moreover, each factor needs to be addressed and improved if people's trust in industry and acceptance of CSG development in their communities is to improve.
- Figure 57 shows the most important drivers of social acceptance by the size of the bubbles. Perceived impacts, trust in industry, perceived benefits, and governance are the four most important drivers.

Figure 57 Total effects of the different drivers on levels of social acceptance

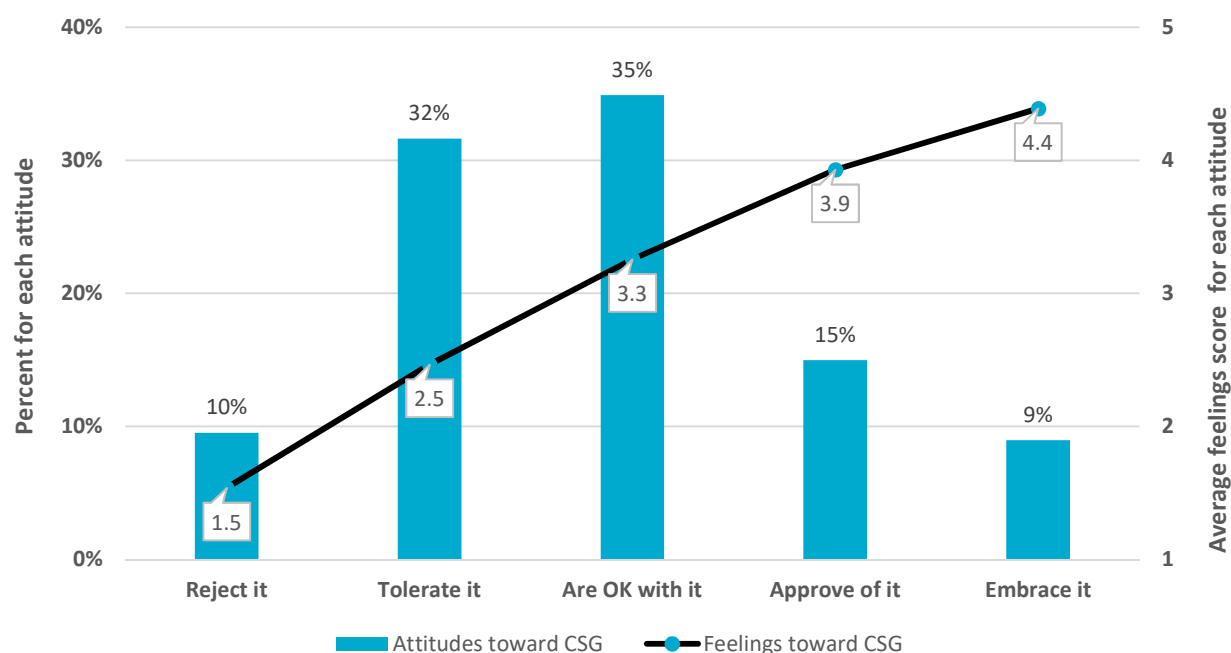


Note: Size of bubble indicates relative importance of that driver; height of bubble indicates perception score of the driver (y axis); bubbles below the red line indicate an unfavourable perception for that driver except for perceived impacts where a higher score indicates greater concerns about impacts

10.4 Depicting acceptance of gas by the underlying drivers

Feelings about CSG development closely follow overall attitudes toward CSG development. As shown in Figure 58, those approving of or embracing CSG development clearly have favourable feelings about CSG development, and those rejecting it clearly have negative feelings, while those who tolerate it or are OK with it have more moderate or 'lukewarm' feelings about CSG development.

Figure 58 Attitudes toward CSG development and feelings scores - Western Downs and eastern Maranoa combined



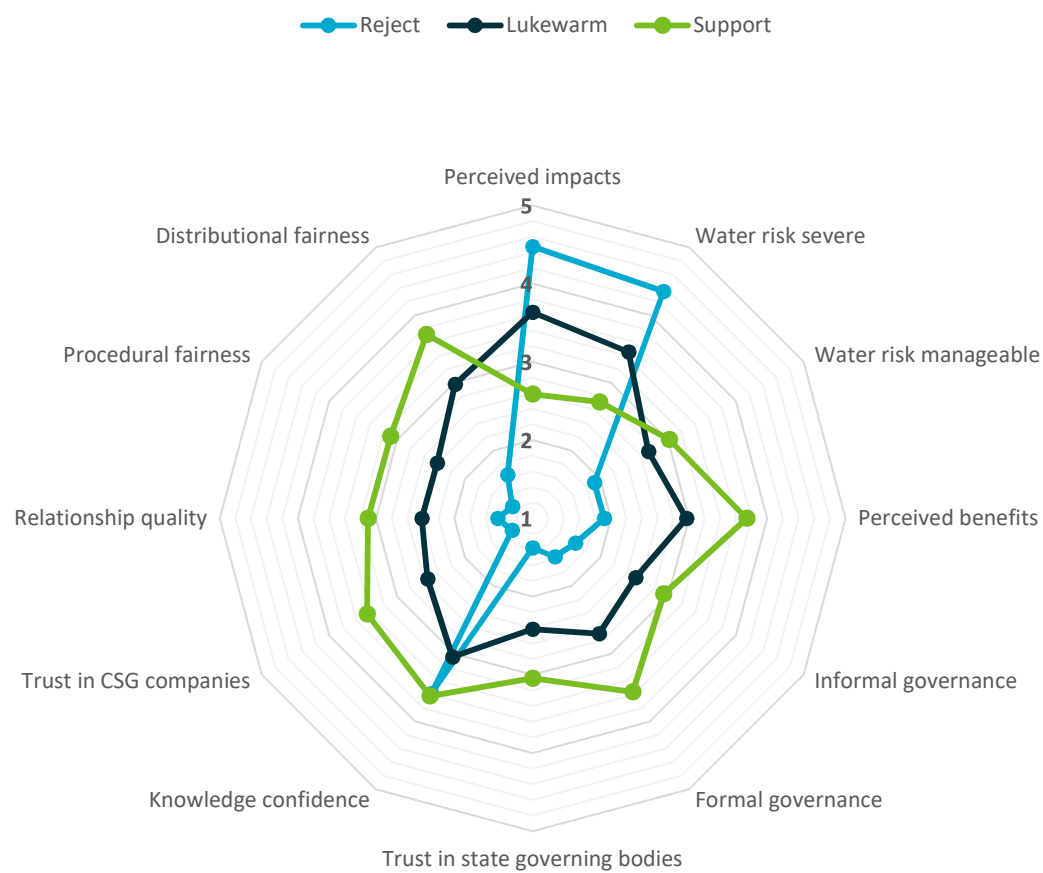
By grouping the different attitudes towards gas into three broad groups – ‘reject’, ‘lukewarm’ (tolerating or OK with it), and ‘support’ (approving or embracing it) – we are able to show in a simplified graphic how the underlying drivers differ among residents who feel more negatively, positively and more neutrally toward CSG development. These differences are depicted in Figure 59.

As shown in Figure 59, those rejecting CSG development perceived the impacts and agreed risks to underground water to be very high (scores well above 4). They also have very unfavourable views around the manageability of underground water risks, benefits, different types of governance (informal, formal, trust in state government bodies), as well as viewing distributional fairness and relational aspects with CSG companies (procedural fairness, relationship quality, and trust in industry) very poorly.

In contrast, those supporting CSG development in the region had more positive views for each of the drivers of social acceptance, except that they were still quite neutral in their views about the manageability of risks for underground water, informal governance, trust in state government bodies, relationship quality with CSG companies, and procedural fairness (scores approximately 3).

Those with more lukewarm attitudes toward CSG development had views somewhere in-between those supporting and those rejecting CSG development, except that they were less confident in their knowledge of the CSG industry. Interestingly, those supporting and those rejecting CSG development were equally confident in their knowledge of the CSG industry. These patterns were similar for both the Western Downs and eastern Maranoa regions.

Figure 59 Underlying drivers of trust and acceptance of CSG development by three broad attitude groupings: Western downs and eastern Maranoa combined



Note: The higher the perception score the more favourable the perception except for *perceived impacts* and *water risks* where the higher the score the greater the level of concern; a score of 3 represents the midline

11 Demographic differences

A range of demographic characteristics were analysed to determine differences in perceptions of community wellbeing, resilient responses, and expected future community wellbeing. In addition analyses were undertaken to identify differences based on demographics in attitudes and perceptions of CSG development in the region. The demographic characteristics analysed included the following:

- *Subregions* (Dalby, Chinchilla, Miles-Wandoan, Tara); *Location* (In-town / Out-of-town); *Age*; *Gender*; *Income level*; *Farm ownership*; *Active leases* (Farmers with active leases / other farmers)

The differences based on subregions, location, and active leases aren't reported throughout the body of the report and also displayed in Tables of differences in Appendix H. Differences based on age, gender, income level, and farm ownership are discussed briefly in this section and also displayed in Appendix H.

Age

Older residents (55+ years) experience higher community wellbeing than other residents, which is in part due to rating local services and facilities higher. However, they have significantly less favourable attitudes and feelings toward CSG development than younger people.

Middle age residents (35 to 55 years) experience significantly lower community wellbeing than older residents, rating services and facilities lower, as well as their own health. They also have less favourable attitudes and feelings toward CSG development in the region than younger people.

Younger adults (less than 35 years) are much more positive toward CSG development, though are still concerned about potential impacts. However, they perceive more benefits, better distributional fairness, and have much more confidence in governance surrounding the CSG industry. See Table 22.

Gender

Women in the Western Downs region reported significantly lower feelings around personal safety, services and facilities, and environmental quality than men. However, they reported significantly higher social interaction and perceptions of community spirit. This is consistent with findings in previous years.

Notwithstanding these differences, women's perceptions of overall community wellbeing, expected future wellbeing, place attachment and community resilience were not significantly different from men, nor were their perceptions and attitudes about CSG significantly different from men, except that they were significantly less confident in their knowledge about the CSG industry. See Table 23.

Income

Those with higher household incomes (\$80,000 or more) were significantly more satisfied with their income sufficiency, community participation, and social interaction. However they were significantly less satisfied with their town appearance. With regard to perceptions and attitudes about CSG, they had more favourable attitudes and feelings toward CSG development in the region. This was reflected in lower perceived impacts and more favourable perceptions around governance. They were also more confident in their knowledge of the industry and felt less need for more information. See Table 24.

Owning a farm or not

Farm owners had similar levels of overall community wellbeing as non-farm owners, as well as similar levels on each dimension, except that they had significantly higher feelings of personal safety. In 2018 however, they had a more optimistic view of future community wellbeing and higher place attachment than residents who did not own farms. This is despite having perceiving lower community resilience to CSG activities in the region, which suggests their optimism for the future is not related to CSG activity. Moreover, their overall attitude and feelings toward CSG development were much less favourable than for other residents. Less favourable perceptions were measured for farm owners on all drivers underlying social acceptance, most of which were significantly less favourable. See Table 25.

12 Conclusions

12.1 Community wellbeing

12.1.1 Communities maintained their sense of wellbeing over three different industry phases

The results showed communities were able to maintain their community wellbeing even though the CSG industry underwent an economic slowdown post-construction. Maintaining services and facilities, community cohesion, social interaction and personal safety at high levels over the period contributed to peoples' continued beliefs that their communities were great places to live and that they offered a good quality of life for people of all ages. Although people viewed economic opportunities for business and employment as dropping during the slowdown of 2016, this did not affect people's overall perception that wellbeing within their communities, which remained robust over time. Thus, community wellbeing was not greatly affected by CSG development in the region on average between 2014 and 2018, even though individual residents may be more or less affected.

12.1.2 Expectations of future community wellbeing more optimistic in 2018 than in 2016

Compared to 2016 there was improved optimism in 2018 for the community's wellbeing in three years hence. In 2016, more people felt their community wellbeing would decline (30%) than improve (14%). However, in 2018 this had changed with equal percentages of people feeling like it would decline or improve (21%). The rest felt it would stay the same (57%).

This improved optimism could reflect a combination of factors including improved outlook from the drought conditions of 2016, together with a smoother outlook for CSG development in the region following the economic slowdown of 2016's post-construction phase of CSG development. The data shows that within a two year period a situation where nearly one third of the community felt the wellbeing in their community would likely decline can improve such that this view within the community is reduced significantly (by almost half) to one fifth of the community within a two year period.

12.1.3 Perceptions of community wellbeing are consistently lower over time for people who live out of town

People who live out of town compared to people who live in town show statistically lower levels of community wellbeing in each year. The main contributing factors are lower perceptions of services and facilities, lower satisfaction with social interactions, and lower satisfaction with roads. Although community wellbeing levels for people who live out of town are still very robust, the findings suggest that easier access to services and facilities, and opportunities to engage more with the local community are important for overall community wellbeing.

12.1.4 The main drivers of community wellbeing are mostly consistent over time

The underlying drivers of wellbeing were mostly consistent over time, with the top four groups of drivers being similar across the three different industry cycles (services and facilities; community spirit, cohesion, trust, participation, and social interaction; and personal safety). However, economic opportunities became more important for community wellbeing in 2016 when the CSG industry slowed down post-construction, whereas environmental quality (e.g., dust and noise) was more important in the construction phase in 2014.

These results demonstrate community wellbeing as largely driven by social aspects and services and facilities. However, for other dimensions it is only when they reach a potentially low threshold that the dimension factors into community wellbeing. During the slowdown of 2016 economic opportunities reached its lowest level ($M = 2.22$) with some subregions with smaller town centres indicating very low levels of satisfaction with employment and business opportunities, such as Miles-Wandoan ($M = 2.04$) and Tara ($M = 2.15$). It may be that when satisfaction with economic opportunities gets this low then it starts to impact community wellbeing. However, when economic opportunities are viewed as satisfactory then it is not considered as overly important to wellbeing within the community. Similarly, environmental quality was a predictor of wellbeing when it was at its lowest during the construction phase of 2014. In 2016, and 2018 environmental quality had risen again to high levels and was no longer a significant predictor of community wellbeing. However, economic opportunities and environmental qualities are consistent indicators of resilience and how well a community believes it is responding to change.

Interestingly, the dimensions that reflect personal situations such as health and income sufficiency were not significant drivers of community wellbeing during any phase of the industry cycle. Other research shows that these types of dimensions are important predictors of individual or personal wellbeing (Cummins, 1996). Our research shows that a person can still view their community as a good place to live or offering a good quality of life, despite the level of satisfaction with their own health or income sufficiency.

12.1.5 Attitudes and feelings about CSG development shape expectations of future community wellbeing but only in the construction phase

Attitudes and feelings about CSG development were important predictors of people's expectations about future community wellbeing but only during the construction phase of 2014. During this time, when people held positive views about CSG development they also held more positive views about the future wellbeing in the community. Similarly, if people held negative views about CSG development it contributed to a less positive view about their community's future.

In contrast, attitudes and feelings towards CSG development did not contribute to people's expectations of future community wellbeing in the Western Downs in 2016 and 2018. This suggests that over time there is declining importance of how individuals view CSG development in shaping how they expect their community will be as a place to live in three years hence. However, their views about how well their community was adapting to CSG development consistently shaped expectations about their community's future wellbeing in different industry phases.

12.2 Community resilience and adapting

12.2.1 Overall resilience actions to CSG development did not appear to improve over time

The survey asked questions about a range of community resilience actions in relation to responding to changes from CSG activities in the region. These included questions about planning, leadership, and accessing information, which are considered necessary components for responding strategically and proactively to change. In addition, participants were asked about the community's ability to work together as a collective with other stakeholders such as government and industry to address challenges and opportunities related to CSG development. Finally, participants were asked about the community's commitment and preparedness to persist in finding solutions.

Perceptions of community resilience actions were modest in 2014 and 2016. Instead of improving over time, perceptions of how well the community was responding to CSG were at the lowest in 2018. Even though there was still a positive view in 2018 that communities were getting involved in responding to changes and supporting its volunteers; there was less optimism that communities could persevere to find

solutions. One reason for this waning may be a decline in the perceived ability of local community groups and stakeholders to work together, especially having key people to help get things done, and sharing of resources, information and learnings.

There was also a drop in 2018 in perceptions that local communities were acting strategically in response to CSG development. One explanation could be that in 2018 when CSG industry activity had smoothed out relative to 2014 and 2016, there was a lower need for community actions compared to what was required in earlier years when the region was facing significant economic growth followed by a slowdown. However, these perceptions do not mean that strategic planning was not actually being enacted.

12.2.2 Community coping and adapting remains static

In line with modest levels of community resilience actions to CSG development in the Western Downs, there was no change in perceived community adaption to CSG development over time. Miles had unfavourable perceptions of community coping and adapting on average, and in Tara these dropped to an unfavourable level in 2018.

Together with modest levels of community resilience, it seems that communities in the Western Downs have found responding and adapting to CSG development challenging, at least in the early phases of industry development (i.e., the construction, post-construction and early operations phases). In contrast, levels of community resilience and adapting were significantly higher and positive on average in the eastern Maranoa region.

12.2.3 Adapting to CSG development is different from community wellbeing

The research findings suggest that wellbeing within a community is distinct from (though related to) how a community believes it is adapting to change. Results showed that even though community wellbeing results were quite robust and steady over the 2014-2016-2018 period, perceptions of adapting to CSG development remained at very modest levels over the period. In the Western Downs, only half of the residents surveyed indicated they felt their community was adapting and coping well with changes from CSG development and this view persisted over the three data collection phases. In eastern Maranoa by comparison, over 60% of residents felt their community was adapting and coping well.

One explanation for this result is that two of the main drivers or indicators of adapting well to CSG development – employment and business opportunities and local decision making processes – were assessed as being relatively low or unsatisfactory over the 2014-2016-2018 period. Also actions important to resilience were assessed unfavourably on average during this time, such as processes within the community for sharing information about CSG development, and proactive planning to deal with changes. Finally, environmental management - especially in relation to water - is a key concern of communities in gas regions, and this acts as a key indicator of perceived adapting to CSG development. Environmental management is another indicator that was rated poorly in 2014, though it improved somewhat in 2016 and 2018.

When people feel these indicators of resilience and adapting are functioning at high levels then they also feel their communities are adapting well. Conversely if people feel these factors are weak or functioning poorly then they feel their communities are not adapting well.

The subregions with the smaller town centres reported lower levels of these factors and subsequent lower levels of feeling like they are adapting well to CSG development. If these aspects were to improve then it is expected that these communities would judge their adaptation to CSG development far more positively.

12.3 Attitudes and perceptions of CSG development in the region

12.3.1 Feelings towards CSG development had softened over the four year period but a range of views remain

In 2018 people generally did not report strong feelings towards coal seam gas development and their feelings had softened over the four year period. However, attitudes towards CSG development continued to show diversity and nuance with a range of views. In the Western Downs and eastern Maranoa regions attitudes towards CSG were not polarised, rather they demonstrated a relatively normal distribution or range of attitudes with most views in the mid-range.

12.3.2 Risks to underground water remain the main concern about CSG development

The top two concerns regarding CSG development were about the potential for affecting water quantity and water quality. Despite extensive research into the impacts on water from a range of research institutions such as CSIRO's GISERA and The University of Queensland's Centre for Coal Seam Gas, and comprehensive ongoing monitoring by the QLD state government (Queensland Government, 2018), the community is uncertain as to whether the science understands the risks to underground water. This reflects the level of importance that underground water resources represent to rural communities and the perceived devastating outcome that communities potentially associate with damage to the underground aquifers. The perceived complexity and lack of confidence in the underlying science combined with issues of trust in the CSG industry and state government regulating bodies may make it difficult for stakeholders to feel confident that any risks to groundwater can be adequately managed.

The Australian government is, at the time of preparing this report, undertaking a senate inquiry into the regulatory framework governing water use by the extractive industries (i.e., the Senate Enquiry into '*Water use by the extractive industry*'). The report is due for release in late 2018 and it is possible that the outcome may alleviate some uncertainties for some landowners. Nonetheless, concerns around risks to underground water are likely to persist for some time until people feel that sufficient trust and confidence in the science, governance processes and structures, and best practice approaches to effectively manage groundwater impacts have been established.

12.3.3 Previous connection with the industry is linked to lower levels of concern about impacts

People with previous experience with the industry, either through family and friends working in the industry, or they themselves working in the sector, had higher confidence in their knowledge about water impacts, well integrity and the local industry than people who didn't have this type of connection. They also indicated lower levels of concern about impacts on air, water, and health, as well as a lesser need for more information.

One explanation for this finding is that they have developed increased awareness and understanding of the industry from their own experiences or from those that they trust (family and friends); understandings such as risk mitigation strategies, the technologies associated with the industry, and industry standards and practices. This may reduce fears about potential impacts and consequently increase trust in the industry. In addition, these individuals may have experienced or are more aware of potential local benefits from the industry, such as employment and business opportunities, and consider the benefits as outweighing the risks.

12.3.4 Local and societal benefits from CSG development were both seen as modest

Enhancing benefits is important for building trust in the industry, distributional fairness and social acceptance of CSG development; and it is important to convey both local as well as societal benefits of CSG development to local communities. When considering the benefits from CSG development, people viewed the local benefits more favourably than the benefits CSG can deliver to society. Moreover, perceived benefits and distributional fairness were significantly lower for those living out-of-town.

People viewed both local and societal benefits from CSG development modestly on average in the Western Downs. They tended to agree the CSG companies provided corporate support for local community activities and that CSG development benefitted the wider Australian economy. However, there was less agreement about whether this development provided additional services and facilities; opportunities for local business and employment, especially for the youth; nor the wider societal benefits of CSG as a transition fuel between coal and renewables. In comparison, the eastern Maranoa participants rated both local and societal benefits from CSG development more favourably. This may relate to a longer history of co-existing with conventional and unconventional gas development in the eastern Maranoa combined with less intensive cropping activity undertaken within the region.

12.3.5 Size of towns matters in the way local benefits and impacts are perceived

Not all subregions perceived the benefits and impacts in the same way. The results showed that the smaller centres of Miles-Wandoan and Tara were less positive, on average, in their perceptions of local benefits and viewed impacts as more concerning than the larger centres of Dalby and Chinchilla.

One possible explanation for this is that larger centres house larger sized local businesses that are more likely to provide local goods, services and labour to the CSG sector and benefit from the industry. In addition, larger towns are more able to manage the rapid changes in economic activity than smaller towns, particularly in relation to slowdowns. The larger number of businesses and the increased diversity of businesses in larger towns compared to smaller towns would help to buffer the impact of an economic slowdown that affects one industry sector.

Moreover, the smaller towns are further west and experienced the drought conditions of 2015/2016 more severely. These towns are potentially very dependent on the agricultural sector and the combination of the drought with the slowdown from CSG development in 2016 would have exacerbated the impact of the post-construction phase.

International studies of economic effects in shale gas regions of North America also indicate differences in the way towns respond to unconventional gas development based on their size and isolation. The larger the centre the less likely the town is to experience negative impacts from housing and cost of living pressures, and the more likely they are to benefit from increased economic activity (Jacquet & Kay, 2014).

12.4 More favourable perceptions in the eastern Maranoa than the Western downs region

12.4.1 Community wellbeing and resilience higher in the eastern Maranoa

Evaluations of local communities and attitudes to CSG were generally more favourable in the eastern Maranoa region. This extended across a range of community wellbeing dimensions in 2018, including some main drivers of overall community wellbeing (services and facilities, community cohesion and local trust). Overall community wellbeing was significantly higher in the eastern Maranoa, as was place attachment, however place attachment was still very high in the Western Downs region and overall community wellbeing still quite robust.

Community resilience in responding to CSG development was more positive in the eastern Maranoa, though still not high. Low perceptions of community resilience to CSG tends to make residents' less optimistic about their future community wellbeing. However, despite this pessimistic tendency, community wellbeing has not significantly changed between 2014 to 2018 in the Western Downs region.

12.4.2 Perceived impacts are lower in eastern Maranoa compared to the Western Downs

Residents in the eastern Maranoa also had more positive attitudes toward CSG development. They still had concerns about the impacts of CSG development, though these were significantly less than in the Western Downs region, and they were not concerned on average with health impacts; environmental impacts of dust, light, noise or air contamination; nor were they concerned about a risk of fire from CSG development.

More favourable responses to CSG development in the eastern Maranoa region may reflect a couple of things: 1) a longer history with CSG development since the mid-1990s, and an even longer history with conventional gas development since the early 1900s; and 2) an easier co-existence with CSG development with less intensive cropping and more livestock grazing in the region. However, residents in the eastern Maranoa were not any more confident in their knowledge of CSG development and exhibited the same need for more information as residents in the Western Downs region.

Next steps

Sharing findings, key messages, and lessons learned

An important component of GISERA research is sharing our findings with community, farming, industry, research, and government stakeholders, including tailoring communication to meet the needs of specific stakeholders and identifying opportunities to improve community wellbeing and adaptation to CSG development in the region. A series of small discussion groups are being organised with various community, farming, industry, research and government stakeholders to share these findings, encourage their use in plans and policy, and further develop the key messages and lessons for these stakeholders from the Queensland CSG development experience.

An interactive website is also being developed which will allow users to explore various dimensions of community wellbeing, resilience, and attitudes to CSG development for different years, regions, subregions, and demographics.

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Appendix A Sample representativeness

The 2018 sample was somewhat over-representative of older females and under-representative of younger males, so the sample was weighted by age and sex to be representative of the 2016 population census for the Western Downs and eastern part of the Maranoa regions. Weighting data this way means that responses for residents surveyed in each age and sex category were adjusted to reflect the number of residents in each age and sex category in the population census. Table 12 shows that the weighted samples closely match the 2016 population census on age and sex, and are broadly representative on employed status and whether living in or out-of-town. These demographic characteristics are also consistent over time, which means that any changes in survey statistics over time are not affected by changes in age, gender, employment status or whether living in or out-of-town.

Table 12 Profile of weighted sample

	Western Downs region				Eastern Maranoa region	
	2014 survey	2016 survey	2018 survey	ABS 2016 census	2018 survey	ABS 2016 census
18-34yrs	27.4%	27.3%	27.5%	27.4%	31.1%	31.1%
35-54yrs	35.4%	35.7%	35.4%	35.5%	35.3%	35.3%
55+yrs	37.2%	37.0%	37.2%	37.1%	33.6%	33.7%
Male	50.8%	50.8%	50.8%	50.9%	50.6%	50.5%
Employed	67.0%	67.5%	68.9%	62.4%	73.2%	72.1%
Location in-town	51.7%	52.4%	50.9%	65.2%	72.6%	70.6%

Appendix B Measures and reliability of scale items

Separate scales were developed for the various measures associated with community wellbeing and perceptions of the CSG sector by averaging the score of the items within the respective scale. All multi-item measures were tested for 'internal consistency' or reliability. As shown in Table 13, the reliability of all multi-item measures (scales) usually exceeded .80. Reliability over .90 is considered very good, over .80 is considered good, and .70 considered adequate for scale development.

Table 13 Measuring community wellbeing and perceptions of the CSG sector: 2018 survey

Measures of community wellbeing and resilience	No. of items	Scale type and reliability ¹	Survey items in 2018 (items in brackets not used in scale because not collected in all years)
Personal safety	4	Agreement .81	It is safe to be alone at home during the night; to walk alone outside at night; to leave the car by the roadside at night; overall feel safe living in the area
Income sufficiency	4 (3)	Agreement .91	Your income is enough for household expenses; for the lifestyle you enjoy; (your rent or mortgage repayments impact greatly on household finances); overall satisfied income covers living expenses
Health	6	Satisfaction .80	With diet and eating habits; exercise habits; physical health; mental health; job security; work life balance; overall satisfaction with health and wellbeing
Services and facilities	9	Satisfaction .90	With local schools; child care facilities; sports and leisure facilities; cultural facilities; shopping for food and everyday items; other shopping; medical and health services; community support services; overall satisfaction with services and facilities
Town appearance	3	Satisfaction .86	With cleanliness in the town; greenery and parks in the town; overall satisfaction with general appearance of the town
Roads	4	Satisfaction .87	With condition; safety; and amount of traffic on roads; roads overall
Environmental quality	4 (3)	Satisfaction .75	With level of dust; noise; (quality of the air); overall quality of the general environment
Environmental management	4	Satisfaction .86	With quality of underground water; nature reserves; and sustainability of local farming land for the future; overall management of the natural environment for the future
Local decision making	4	Agreement .88	Local council informs residents; opportunities to be heard; local council can be trusted; overall satisfied with how decisions are made for the community
Economic opportunities	3	Agreement .87	There are good job opportunities; local businesses are doing well; overall satisfied with employment and business opportunities
Community spirit	4	Agreement .91	People can rely upon one another for help; people have friendly relationships; can work together if there is a serious problem; overall there is good community spirit around here.
Community cohesion	4 (3)	Agreement .88	Community is welcoming of newcomers; and people of different cultures; (is tolerant of people with different views); overall community includes everyone no matter who they are
Local trust	3	Agreement .81	People that you see around [local area] can generally be trusted; local community leaders can be trusted; overall satisfied with levels of trust in local area
Community participation	4	Agreement .89	Regularly help out as a volunteer; attended several community events in the past year; very active member of a local group; overall participate regularly in community activities
Social interaction	4	Agreement .80	Regularly visit someone's home; go out together socially; speak or text on phone; overall satisfied with level of social interaction in local area

Overall community wellbeing	5	Agreement .85	Community is suitable for young children; teenagers; seniors; overall offers a good quality of life; overall happy living in local area
Expected future wellbeing	2	Agreement .88	In 3 years time, I will be happy living in this local area; it will offer a good quality of life
Place attachment	3	Agreement .85	Feel that I belong to this area; pleased to come back to the area if I go away; overall feel very attached to the local area
Overall community resilience	11 (9)	Agreement .92	Proactive planning; adequate leadership; access to information; (sharing resources, information and learnings); key people to get things done; perseverance to find solutions; community supports volunteers; (and gets involved); residents, government, business, resource companies can work together to address problems; and to make opportunities; overall satisfied with the way community is responding to changes from CSG development
Coping and adapting	2	Agreement .95	Local area and surrounds is coping with CSG activities; is adapting to CSG activities

Notes: ¹ The Spearman-Brown Rho correlation was used for two item measures and Cronbach's alpha for other measures

Measures for perceptions and attitudes about CSG	No. of items	Scale type and reliability ¹	Examples for scale items
Perceived impacts	19	Concern .96	Water contamination; depletion of aquifers; health impacts; the natural environment; community division; CSG extending into other areas; well integrity over time
Water risk manageability	3	Agreement .78	Risks to underground water are understood by science; are understood by the community; are manageable
Water risk severity	1	Agreement n.a.	Risks to underground water are potentially catastrophic
Perceived benefits	10	Agreement .92	Local employment; local business opportunities; corporate support for local community activities; energy supply in Australia; as a transition fuel
Distributional fairness	3	Agreement .79	You consider it fair to live near CSG development if compensated accordingly; if local council compensated accordingly; your community receives a fair share of the benefits
Procedural fairness	4	Agreement .91	CSG company would listen to and respect community opinions; be prepared to change its practices in response to community sentiment; inform residents of important developments; give opportunities for communities to participate in decision making
Relationship quality	4	Agreement .92	CSG companies are accessible or easy to contact; open, honest and transparent; engage in genuine two way dialogue; respond to issues in a timely manner
Governance overall	12	Agreement .95	See items for sub-scales:
- Informal governance	4	Agreement .90	The regional council listens to and advocates for local communities on CSG issues; has good plans and strategic vision re CSG development; govt. regulators listen to and respond to community concerns; and inform local communities of any issues with CSG activities as they arise.
- Formal governance	4	Agreement .88	CSG companies comply with regulations; with land access agreements; legislation and regulation can be counted on to ensure CSG companies do the right thing; govt. regulators are able to hold companies accountable
- Trust in governing bodies	4 (3)	Extent of trust .96	Trust state governing bodies overseeing CSG to act responsibly; in local community's best interest's; trust their capability; overall extent of trust
Trust in CSG company	4	Extent of trust .95	Trust local CSG companies to act responsibly; in local community's best interest's; trust their capability; overall extent of trust

Community attitudes and feelings toward CSG	5	Agreement .88	Attitude: reject, tolerate, accept, approve, embrace it (categorical) Feelings: pleased; optimistic; angry; worried
Knowledge confidence	3	Level .87	How much do you feel you know about the local coal seam gas industry; how the gas is extracted; how underground water could be affected
Need for more information	1	Level n.a.	How much more information do you feel you need about the local CSG industry
Knowledge sources	8	Frequency .76	Information sources about the local CSG industry: government sources; research organisations; anti-CSG groups; pro-CSG groups; industry sources; local papers and radio; social media (e.g. Facebook); word of mouth

Notes: ¹ The Spearman-Brown Rho correlation was used for two item measures and Cronbach's alpha for other measures

Development of the measures

The survey questions were developed from previous research conducted on community wellbeing and responding to change in communities experiencing CSG development (Walton et al., 2016; 2013) and informed by the research findings of the previous stage in this research project (Phase 2), which explored community expectations and perceptions of the CSG sector in Narrabri (Walton et al, 2017). Initially these items were developed and adapted from an extensive literature review, including qualitative research in the CSG field (Walton, McCrea, Leonard, & Williams, 2013; Williams & Walton, 2014), and community wellbeing and resilience research (Christakopoulou, Dawson, & Gari, 2001; Forjaz et al., 2011; Morton & Edwards, 2013; Onyx & Leonard, 2010; Sirgy, Widgery, Lee, & Yu, 2010).

In addition, the survey questions relating to social acceptance and trust were developed from previous research conducted by CSIRO on social licence to operate in mining and the waste and resource recovery industries (McCrea et al., 2016; Moffat & Zhang, 2014; Moffat, Zhang, & Boughen, 2014) and further informed by research conducted in Narrabri in relation to CSG development (Walton & McCrea, 2017; Walton et al., 2017).

Appendix C Statistical results for models

WEIGHTED REGRESSION: PREDICTING COMMUNITY WELLBEING

A weighted regression was undertaken to determine which dimensions were the most important in explaining community wellbeing in 2018. The analysis predicted overall community wellbeing very well explaining 59% of the variance ($R^2 = .59$). Beta coefficients indicate the importance of each dimension in contributing to overall community wellbeing. **Error! Reference source not found.** Table 14 displays beta coefficients for each predictor variable and the significant predictors ($p < .05$) are indicated in bold font.

Table 14 Explaining overall community wellbeing from wellbeing dimensions, Western Downs 2018: Weighted regression analysis

Community wellbeing dimension	Beta coefficient
Community cohesion	0.23
Services and facilities	0.17
Local trust	0.17
Social interaction	0.15
Community spirit	0.10
Roads	0.08
Personal safety	0.08
Built environment	0.07
Environmental quality	0.07
Income sufficiency	0.05
Environmental management	-0.04
Economic opportunities	0.03
Community participation	0.02
Health	0.00

Note: Beta is the standardised coefficient, it is scale free and used to compare predictors; Bold face indicates the most important dimensions for community wellbeing ($p < .05$).

WEIGHTED DISCRIMINANT ANALYSIS: IDENTIFYING INDICATORS OF HIGH COMMUNITY FUNCTIONING

A discriminant analysis was conducted to understand which aspects of community resilience actions and dimensions of community wellbeing were most important in explaining the way residents in the Western Downs region thought their community was adapting to CSG development (resisting, not coping, only just coping, adapting or transforming). A discriminant analysis identifies 'functions' or broad factors which combine measures to best explain different categories of the five responses. This discriminant analysis identified one main function, which was called 'community functioning'.

Table 15 shows the correlations of the various community resilience actions and dimensions of community wellbeing with community functioning. The aspects of community resilience actions that correlate most highly with community functioning are bolded. Most important of these were local decision making, economic opportunities, environmental management, local trust, environmental quality, community spirit and community cohesion, all having a correlation of .30 or more with community functioning in each year.

Table 15 Correlations of community resilience actions and dimensions of community wellbeing with community functioning

	Community functioning		
	2014	2016	2018
<u>Community resilience actions</u>			
Acting strategically	0.82	0.83	0.80
Working together	0.70	0.74	0.85
Community commitment	0.53	0.70	0.54
<u>Community wellbeing dimensions</u>			
Local decision making	0.51	0.59	0.48
Economic opportunities	0.62	0.54	0.38
Environmental management	0.45	0.56	0.46
Local trust	0.46	0.42	0.45
Environmental quality	0.30	0.30	0.41
Community spirit	0.32	0.31	0.36
Community cohesion	0.32	0.18	0.39
Income sufficiency	0.32	0.32	0.22
Services and facilities	0.26	0.27	0.30
Roads	0.34	0.11	0.29
Personal safety	0.11	0.17	0.29
Town appearance	0.13	0.21	0.19
Health	0.27	0.12	0.09
Social interaction	0.17	0.17	0.14
Community participation	0.04	0.04	0.08

Note: correlations .30 and over are bolded

MULTIPLE REGRESSION: PREDICTING EXPECTED FUTURE WELLBEING: WESTERN DOWNS

Error! Reference source not found. Table 16 shows the relative importance of various predictors of expected future community wellbeing. These predictors explained over half the variation in expected future community wellbeing for the Western Downs region ($R^2 = .60$). Present community wellbeing, place attachment, and community resilience associated with a proposed CSG development were all statistically significant predictors in each year of data collection, though attitude and feelings toward CSG development was only a significant predictor of their expected future community wellbeing in 2014. Attitudes and feelings towards CSG development was not a statistically significant predictor in 2016 and 2018 ($p > .05$), indicating that perceptions of community resilience to CSG development was more important than individual attitudes and feelings about CSG for generating optimism about future community wellbeing.

Table 16 Explaining expected future community wellbeing: Multiple regression analysis – 2014, 2016, and 2018

Predictors	2014 Beta	2016 Beta	2018 Beta
Community wellbeing	0.39	0.41	0.51
Place attachment	0.24	0.28	0.33
Community resilience	0.23	0.20	0.11
Attitudes and feelings towards CSG	0.16	0.06	- 0.03
R^2	.61	.56	.60

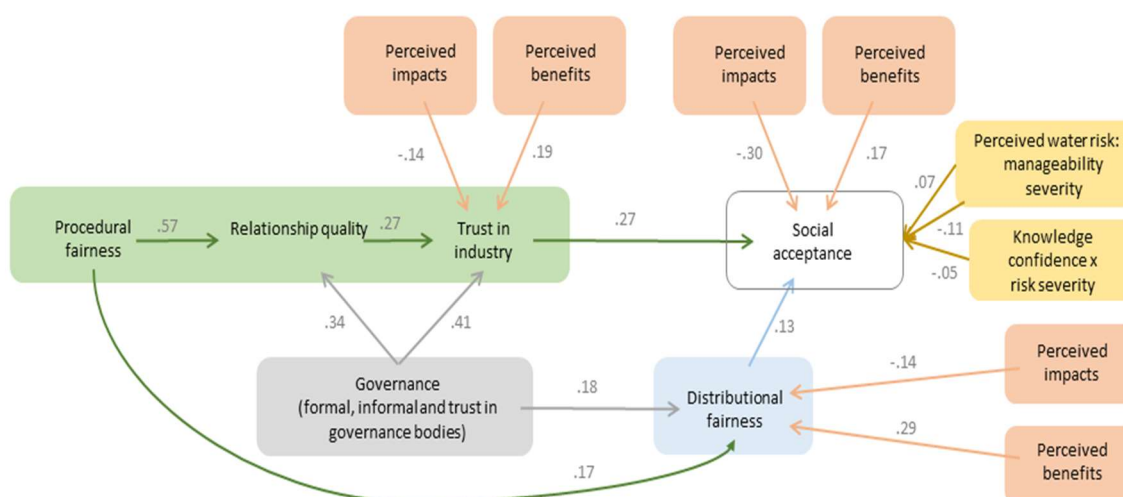
Note: Beta is the standardised coefficient, it is scale free and used to compare predictors;

Bold face indicates significant dimensions for predicting expected future community wellbeing ($p < .05$).

PATH ANALYSIS: MODEL OF SOCIAL ACCEPTANCE AND TRUST

Using the data from both regions, a path analysis modelled nine underlying drivers to explain trust in the CSG industry and social acceptance of CSG development. The model explained two thirds of the variation in social acceptance ($R^2 = .67$) and three quarters of the variation in trust in the CSG industry ($R^2 = .76$). The model fit was very good (SRMSR = 0.02). Figure 60 shows the relationships among the drivers of trust and social acceptance.

Figure 60 A path model of trust in industry and social acceptance, or lack thereof, of CSG development



Note: The impact of knowledge confidence depends on a person's beliefs about water risk severity

An example of how the model works:

When a person perceives impacts from CSG to be high they are more likely to demonstrate lower levels of acceptance, lower perceptions of distributional fairness, and lower levels of trust in industry. And when a person has lower perceptions of trust in industry then they also demonstrate lower levels of acceptance. Similarly, if they believe that governance of the industry is weak, then they will have less trust in industry, a less positive view of the relationship between industry and community, and believe that the distribution of costs and benefits are less fair than if they had a more positive view of governance. In this way, less positive views of governance indirectly lead to less social acceptance.

Alternatively, when a person perceives impacts to be low, benefits to be high, trust to be high, governance to be strong, and costs and benefits to communities shared fairly, then they are likely to be very accepting of the industry.

The model demonstrates that people's trust and acceptance of the industry is dependent on a range of factors. Moreover, each factor needs to be addressed and improved if people's trust in industry and acceptance of CSG development in their communities is to improve.

Appendix D Community wellbeing by year

Figure 61 Community wellbeing dimensions that showed statistically significant changes over time: Western Downs, 2014-2016-2018

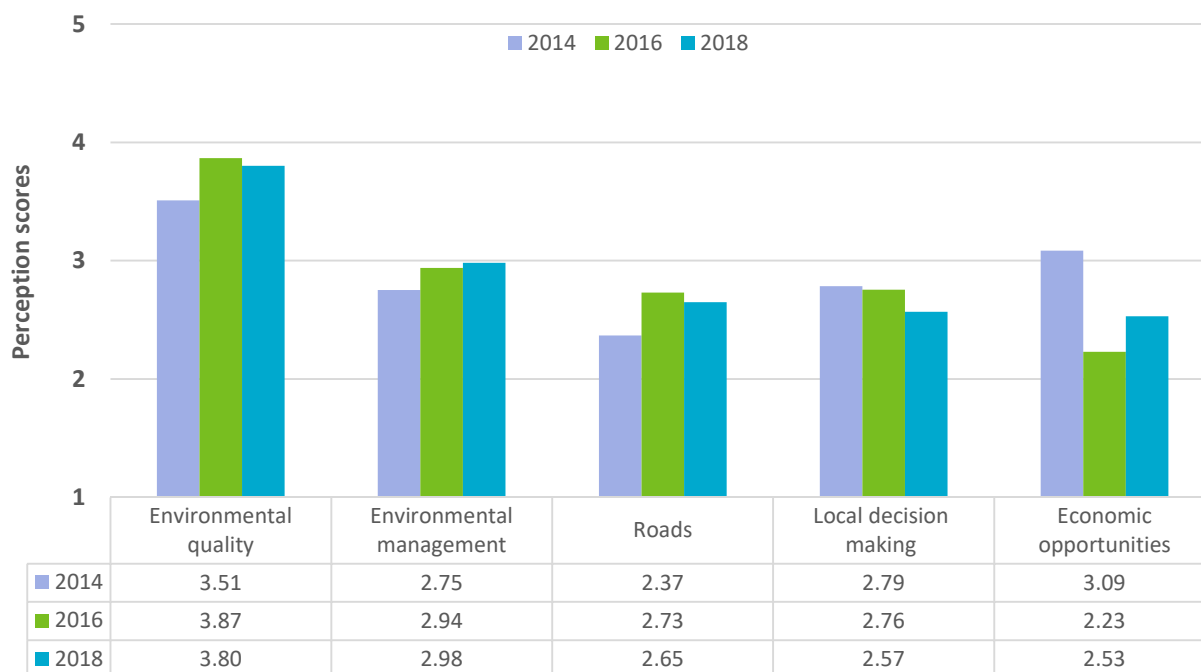


Figure 62 Community wellbeing dimensions that showed no statistically significant changes over time: Western Downs, 2014-2016-2018

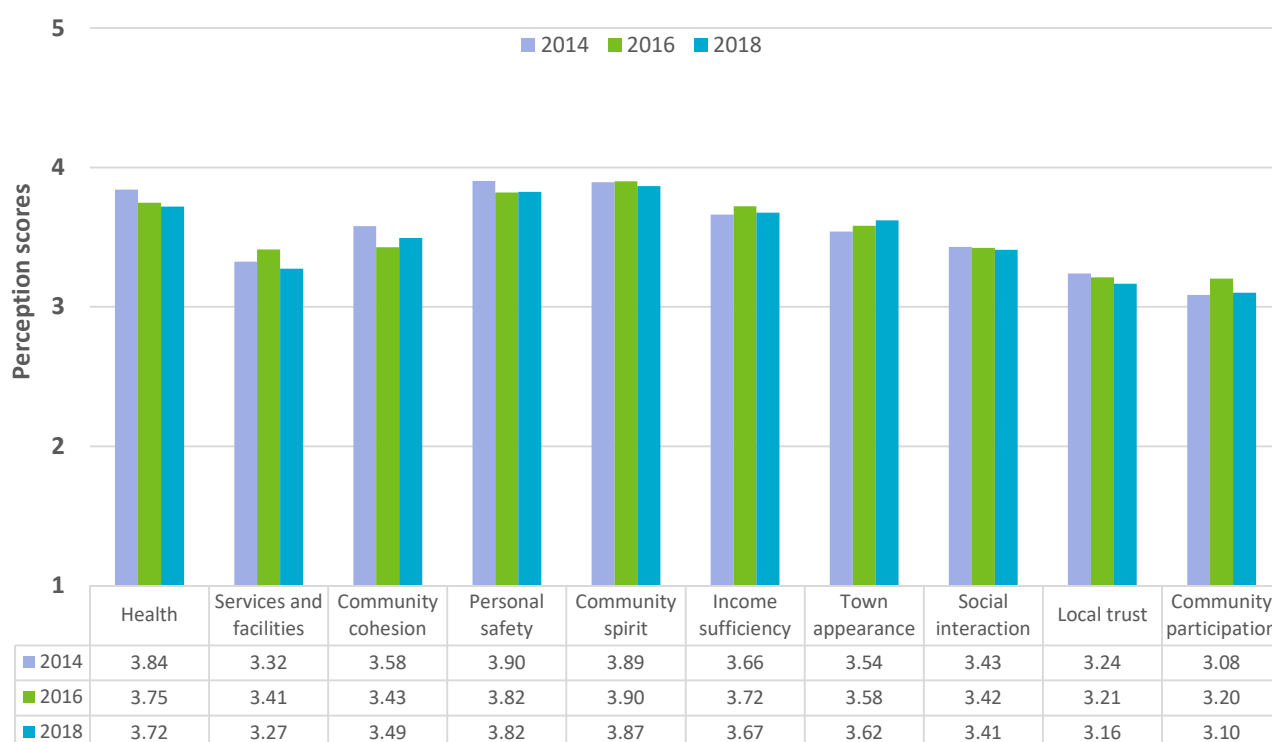


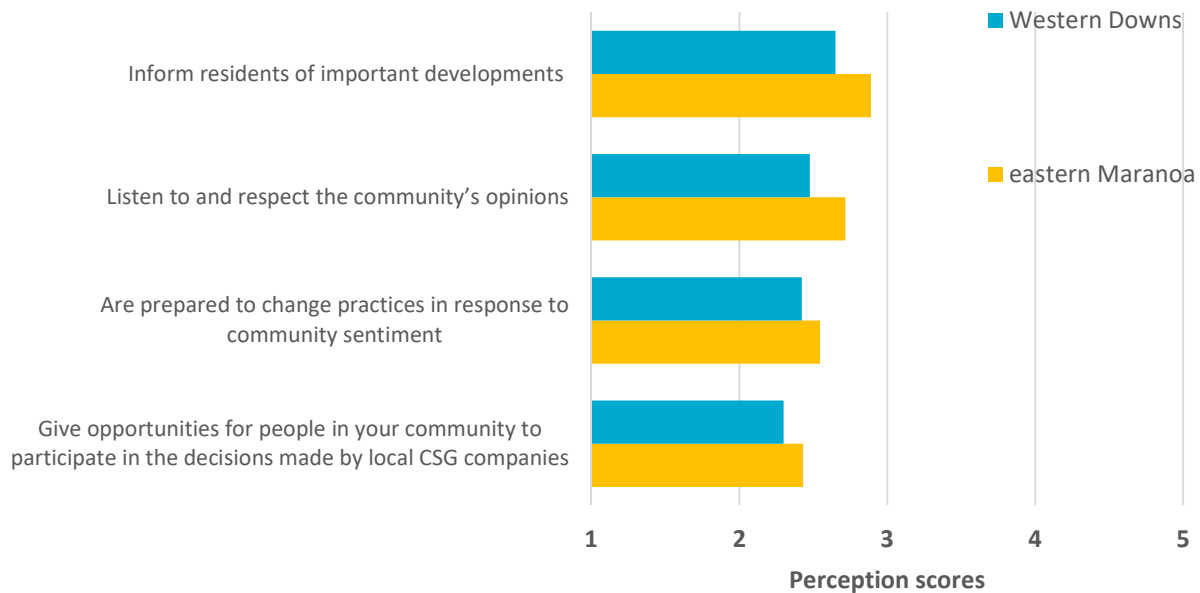
Figure 63 Community wellbeing scores for subregions: 2014, 2016, 2018



Appendix E Perceptions of CSG in 2018

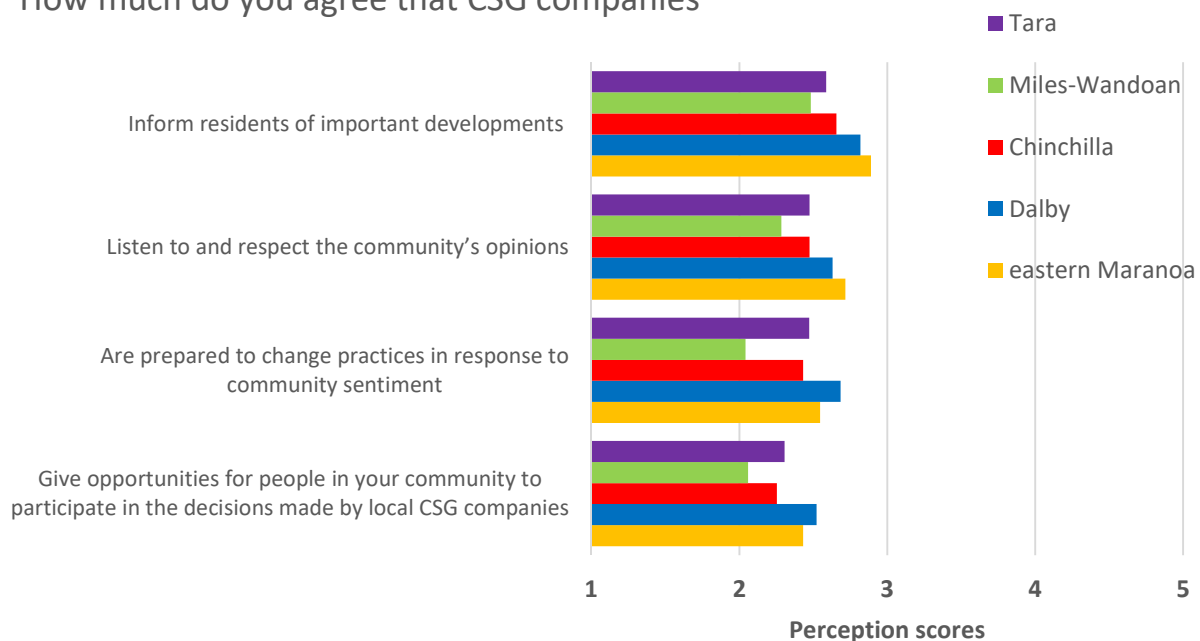
Procedural fairness

How much do you agree that CSG companies ...



Note: 1 = Strongly disagree - 5 = Strongly agree

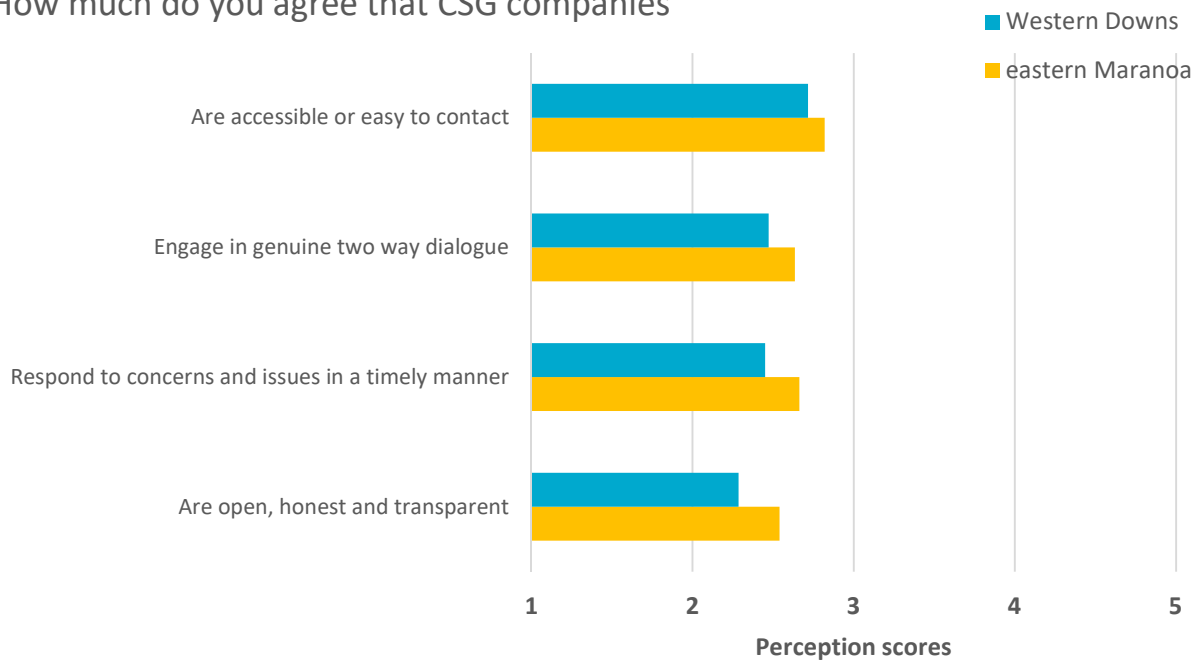
How much do you agree that CSG companies



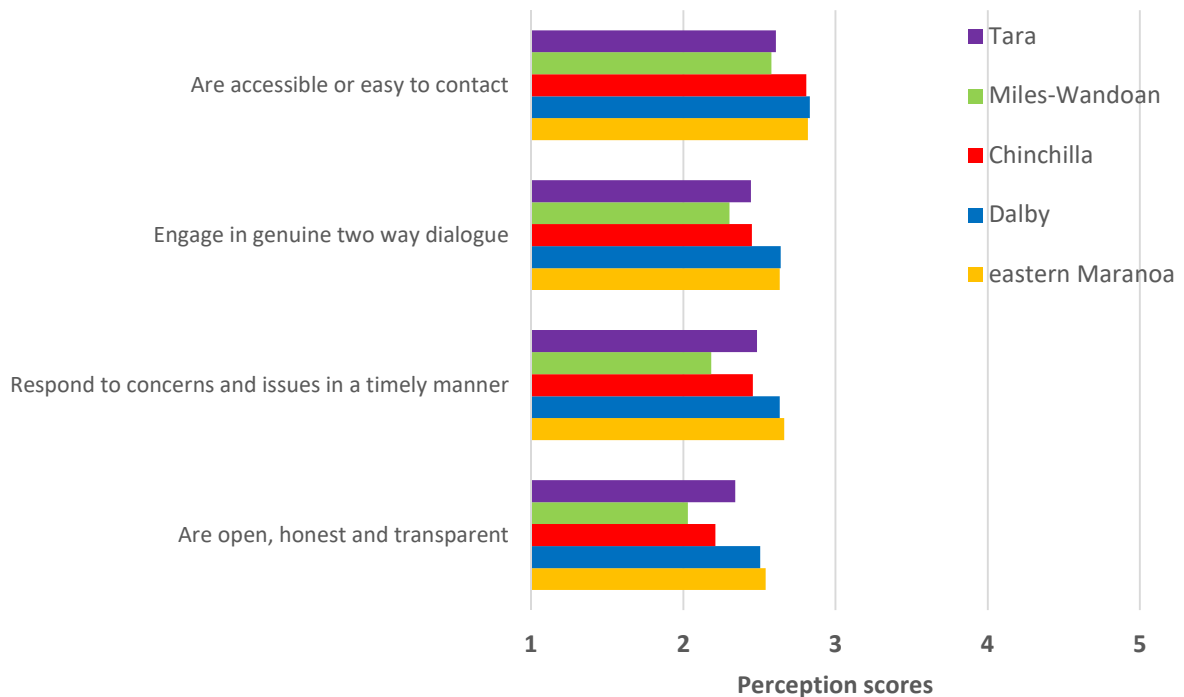
Note: 1 = Strongly disagree - 5 = Strongly agree

Perceived quality of relationships

How much do you agree that CSG companies



How much do you agree that CSG companies ...

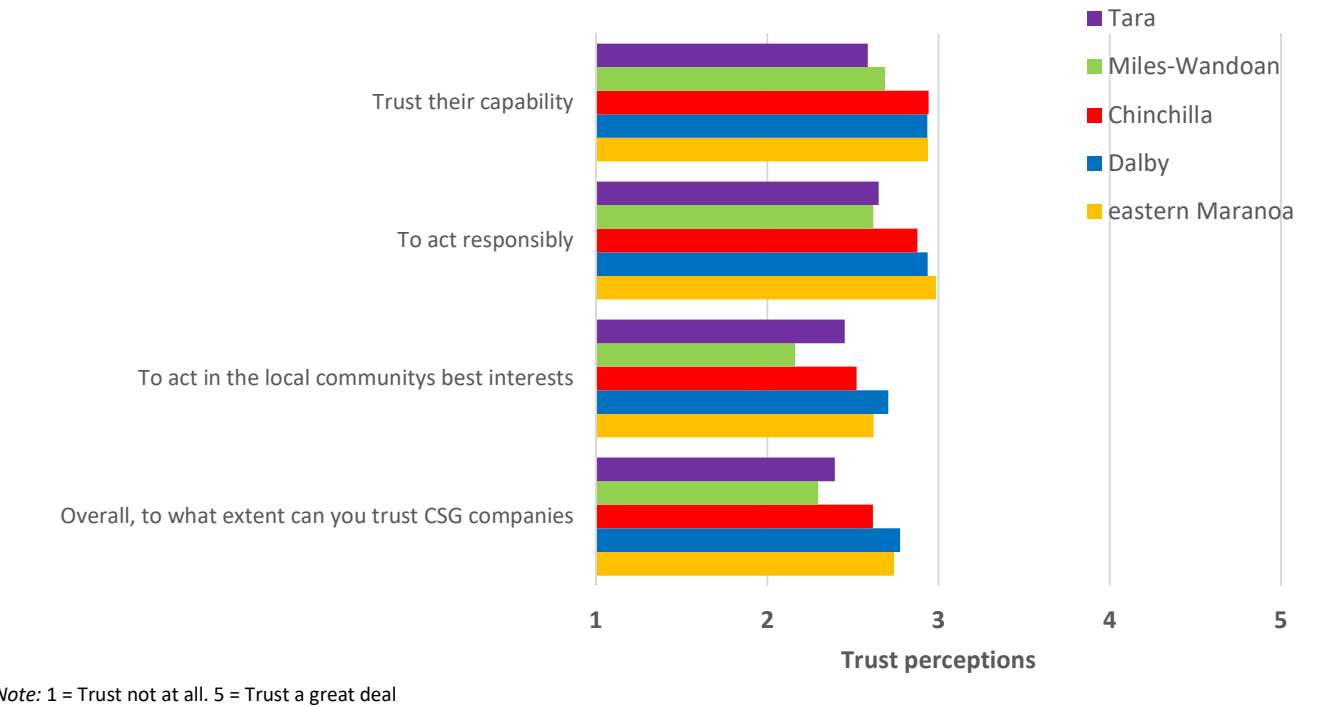


Trust in CSG companies

To what extent can you trust CSG companies

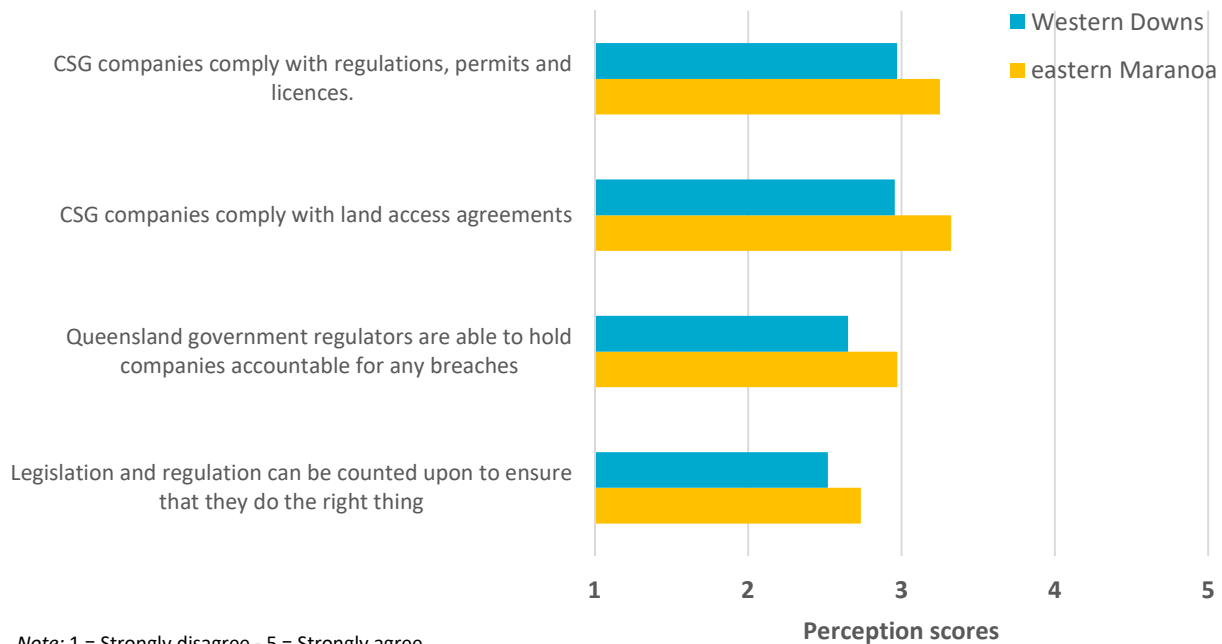


To what extent can you trust CSG companies

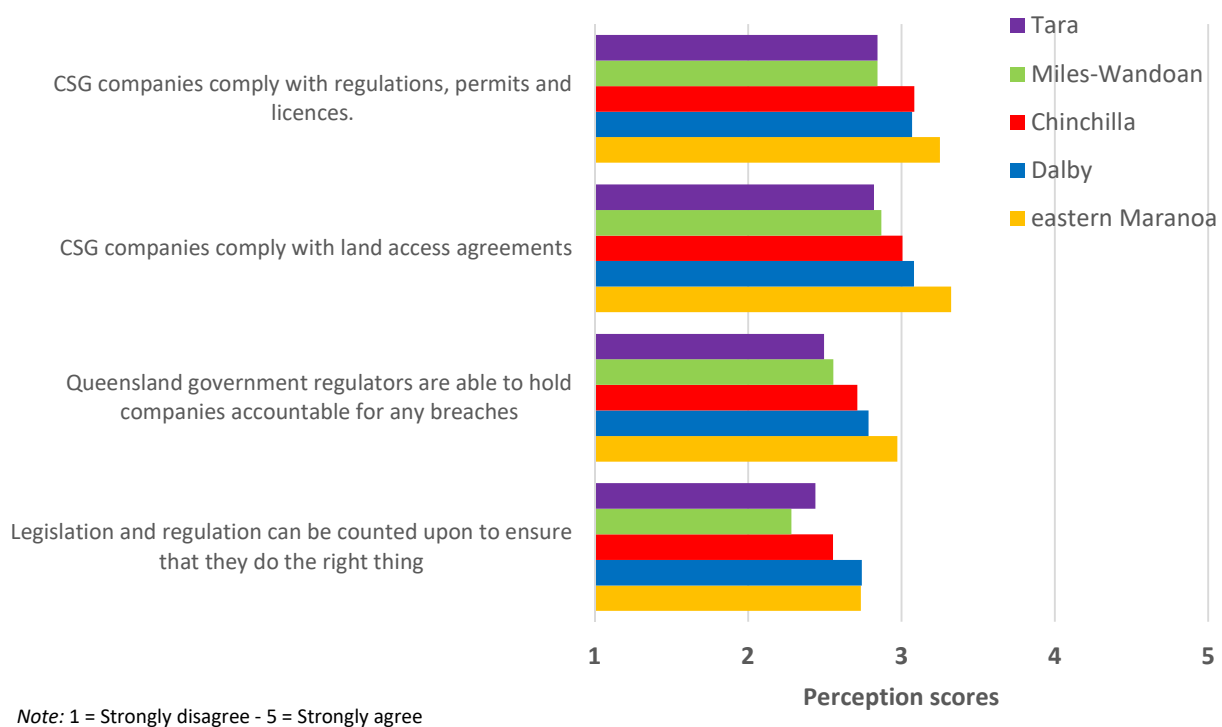


Governance: Formal

How much do you agree that ...

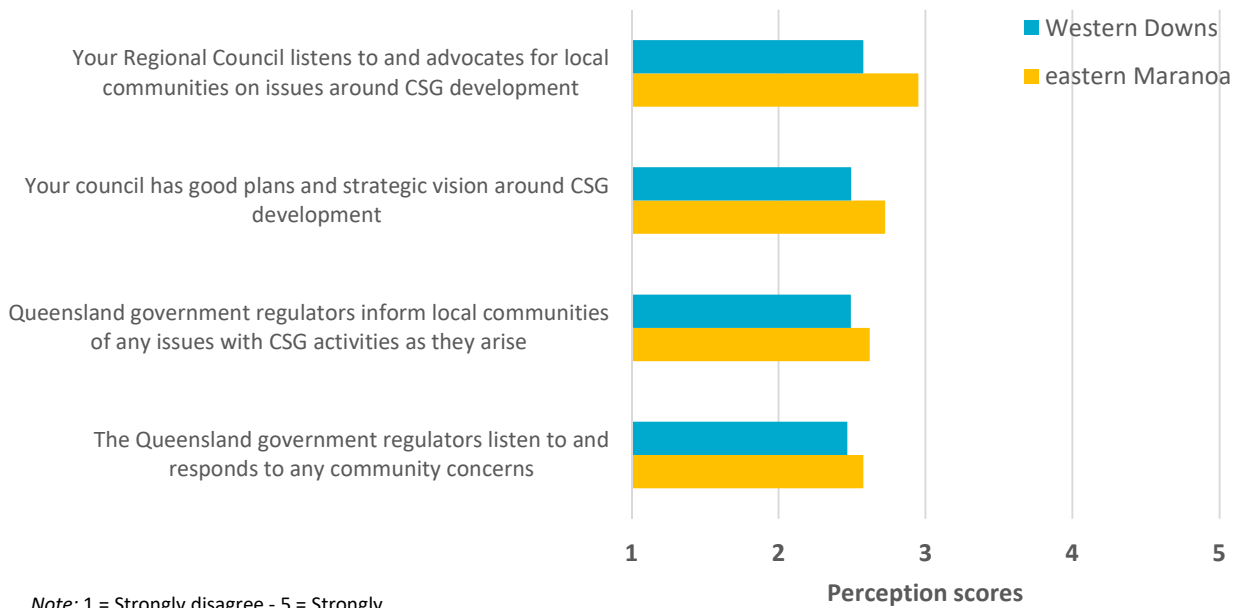


How much do you agree that ...

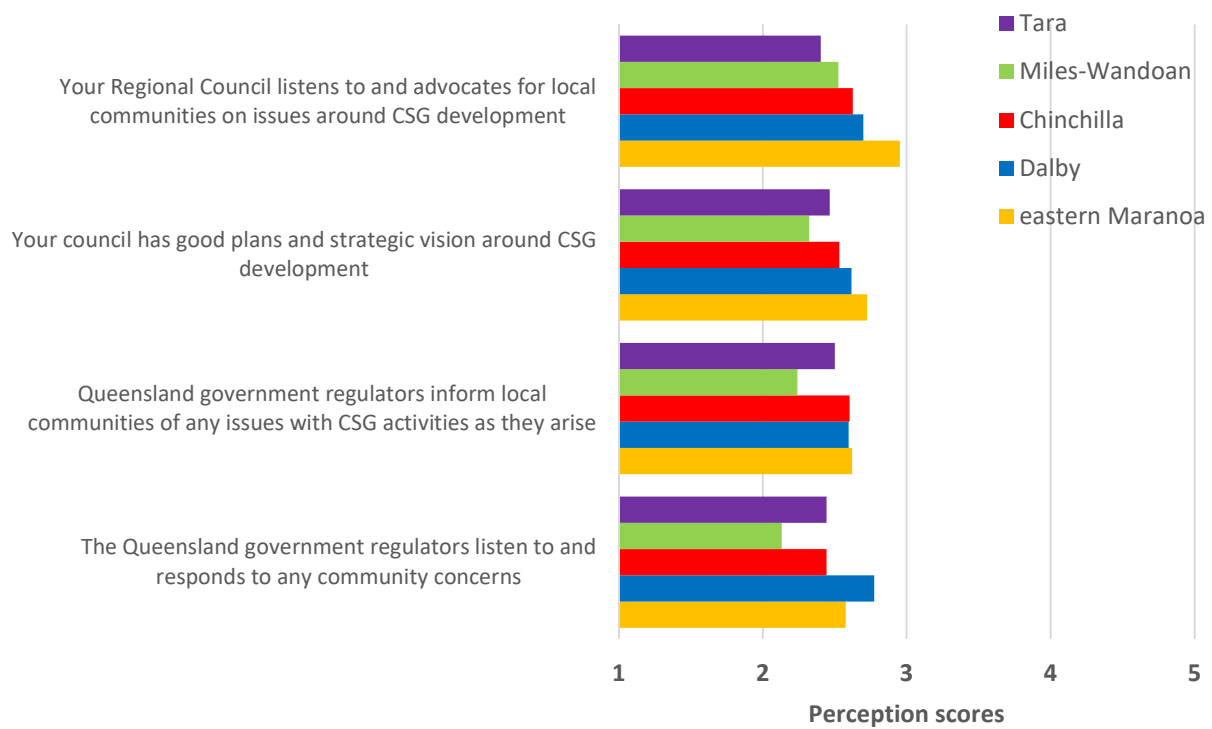


Governance: Informal

How much do you agree ...

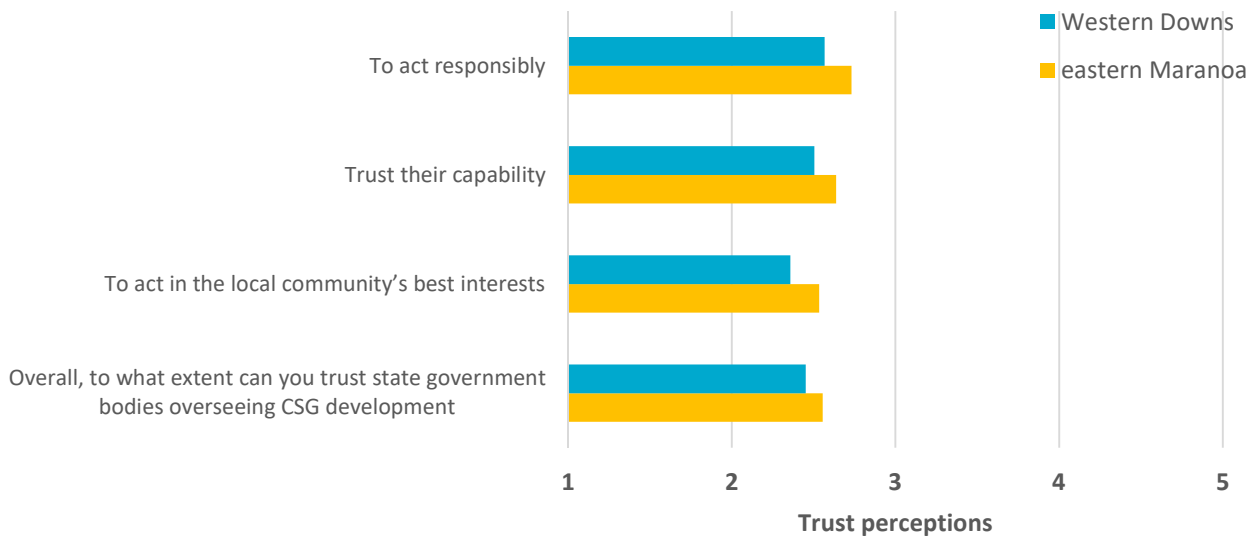


How much do you agree ...

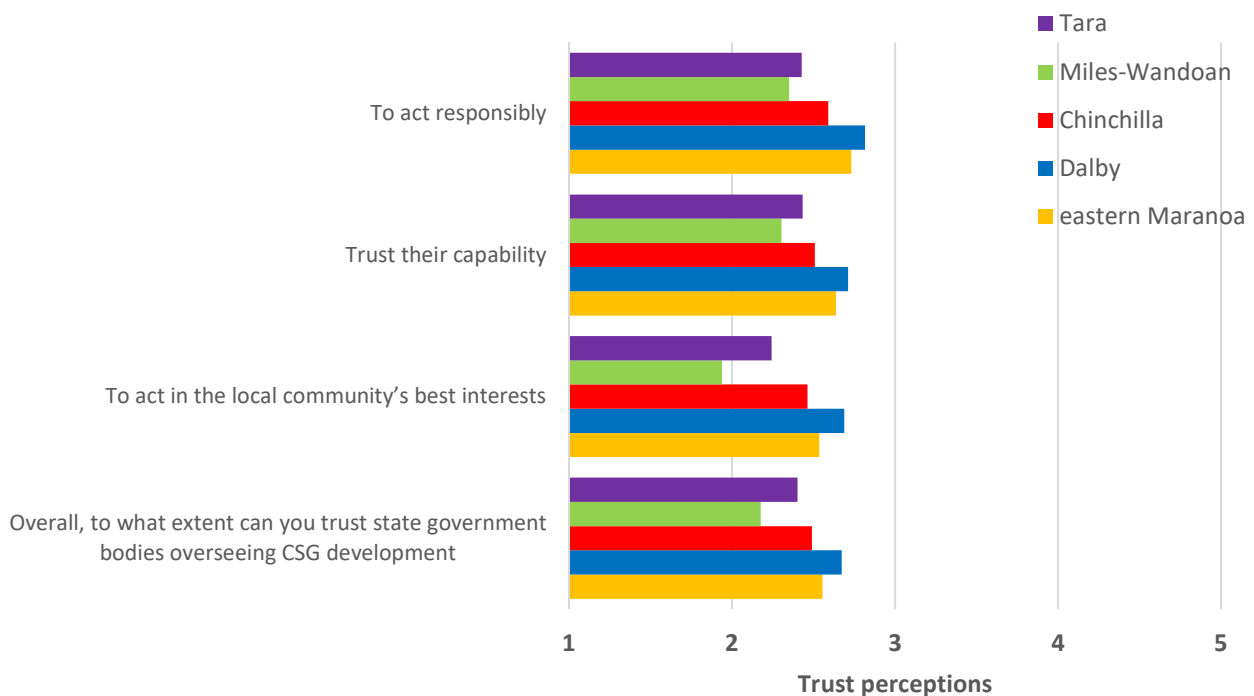


Trust in CSG governing bodies

To what extent can you trust CSG governing bodies ...

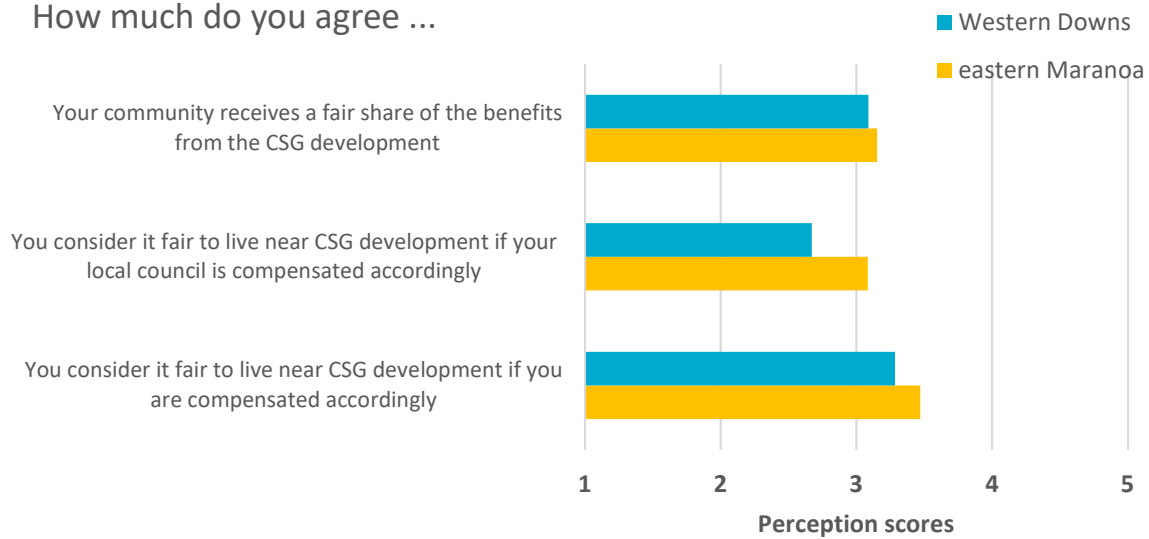


To what extent can you trust CSG governing bodies ...



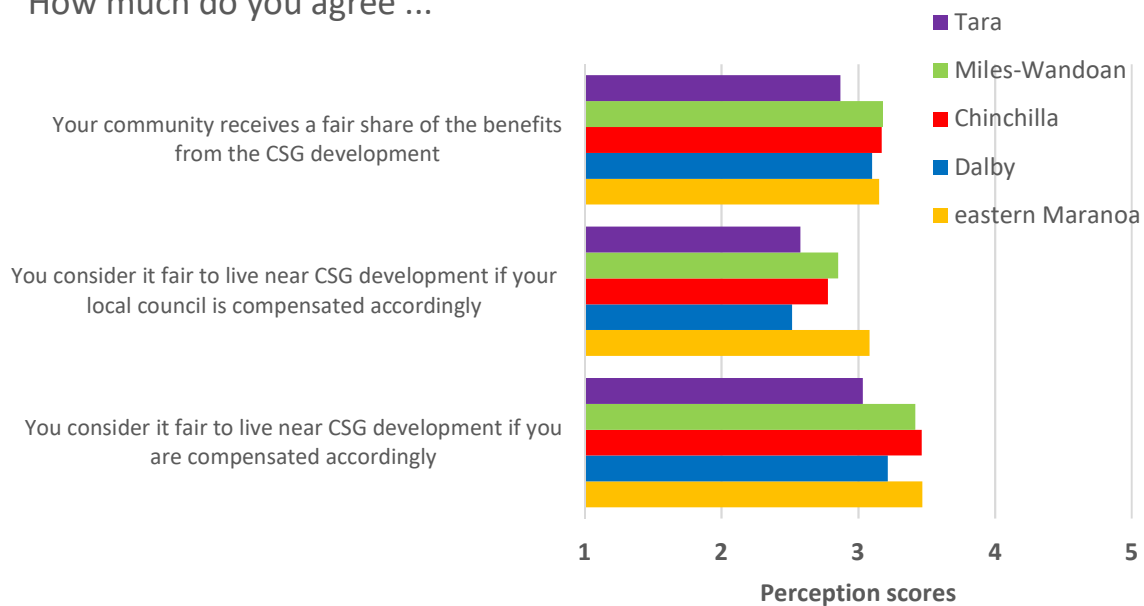
Distributional fairness

How much do you agree ...



Note: 1 = Strongly disagree - 5 = Strongly agree

How much do you agree ...



Note: 1 = Strongly disagree - 5 = Strongly agree

Appendix F Survey item results by subregion - 2018

Table 17 Survey item statistics by subregion for 2018 (weighted data)

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
COMMUNITY WELLBEING							
Place attachment – Thinking about [local area name] and surrounds, how much do you agree with the following statements:							
I feel that I belong to this area	4.17	1.09	4.13	4.28	4.20	4.06	4.44
I am pleased to come back to the area, if I go away	4.16	1.10	4.17	4.12	4.33	4.00	4.37
Overall, I feel very attached to this local area	3.99	1.23	3.86	4.11	4.10	3.92	4.35
Personal safety – Now a few questions about personal safety. On a scale from 1 to 5, how much do you agree that:							
It is safe to be alone at home during the night	4.25	1.03	4.31	3.85	4.52	4.28	4.44
It is safe to walk alone outside at night	3.80	1.31	3.64	3.26	4.21	4.16	4.02
It is safe to leave the car on the side of the road at night	3.01	1.47	3.26	2.54	3.46	2.67	3.46
Overall, I feel safe living in the area	4.24	0.95	4.29	3.96	4.46	4.21	4.47
Income sufficiency – Thinking about your household income, how much do you agree that:							
Your income is enough for household expenses	3.64	1.25	3.82	3.78	3.48	3.37	3.67
Your income is enough for the lifestyle you enjoy	3.62	1.29	3.74	3.75	3.58	3.37	3.68
Your rent or mortgage repayments impact greatly on your household finances	2.80	1.46	2.64	2.94	3.01	2.62	3.08
Overall, I am satisfied that my income covers living expenses	3.76	1.21	3.98	3.84	3.56	3.59	3.88
Health – Thinking about your health and wellbeing, how satisfied are you with:							
Your diet and eating habits	3.80	1.01	3.85	3.83	3.66	3.87	3.63
Your exercise habits	3.42	1.15	3.36	3.47	3.33	3.54	3.20
Your physical health	3.75	1.01	3.76	3.71	3.86	3.64	3.63
Your mental health	4.08	0.96	4.20	3.98	4.10	3.98	4.02
Your job security, if applicable	3.82	1.16	3.95	3.87	3.85	3.55	3.80
Your work-life balance	3.37	1.16	3.39	3.63	3.12	3.32	3.53
Overall, how satisfied are you with your health and wellbeing	3.91	0.86	3.98	3.89	3.91	3.84	3.91

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
Services and facilities – Thinking of services and facilities for your local area, how satisfied are you with:							
Local schools	3.52	1.10	3.82	3.58	3.33	3.22	3.76
Child care facilities	3.19	1.02	3.38	3.38	3.03	2.89	3.45
Sports and leisure facilities	3.38	1.11	3.65	3.58	3.25	2.91	3.72
Cultural facilities	3.15	1.06	3.22	3.29	3.28	2.74	3.40
Shopping for food and everyday items	3.55	1.22	4.09	3.90	3.00	3.02	3.42
Other shopping (e.g., clothes and household goods)	2.70	1.25	3.32	2.92	2.22	2.08	2.81
Medical and health services	3.22	1.19	3.69	3.09	2.72	3.26	3.56
Community support services (e.g. meals on wheels, youth workers)	3.30	1.02	3.50	3.43	3.19	2.99	3.63
Overall, how satisfied are you with the services and facilities of [local area name]	3.46	0.98	3.79	3.47	3.18	3.28	3.67
Built environment – Thinking about [local area name]’s general appearance, how satisfied are you with the following:							
Cleanliness in the town	3.63	1.01	3.51	3.65	3.77	3.61	3.77
Greenery and Parks in the town	3.61	1.05	3.74	3.61	3.69	3.34	3.63
Overall, how satisfied are you with the general appearance of the town	3.62	0.95	3.57	3.66	3.71	3.54	3.78
Roads – Thinking about the roads outside of [local area name], how satisfied are you with the:							
Condition of the roads	2.22	1.18	2.22	2.54	2.40	1.66	2.72
Safety on the roads	2.66	1.15	2.63	2.94	2.74	2.32	3.09
Amount of traffic on roads	3.13	1.06	2.91	3.21	3.14	3.35	3.33
The roads overall	2.58	1.09	2.57	2.87	2.73	2.09	2.93
Environmental quality – Thinking about pollution in the general environment, how satisfied are you with the:							
Level of dust	3.42	1.09	3.50	3.48	3.57	3.09	3.60
Level of noise	4.03	0.95	4.09	3.85	3.96	4.24	4.10
Quality of the air	4.18	0.93	4.18	4.10	4.20	4.24	4.36
Overall quality of the general environment in [local area name]	3.94	0.91	4.03	3.84	3.94	3.94	4.14
Environmental management – Now thinking about the natural environment around [local area name], how satisfied are you with the management of the:							
Quality of underground water for the future	2.59	1.17	2.71	2.61	2.48	2.49	2.95
Nature reserves for the future	3.08	1.09	3.08	3.11	3.19	2.91	3.38
Sustainability of local farming land for the future	3.20	1.18	3.37	3.19	3.14	3.03	3.24
The overall management of the natural environment for the future	3.06	1.03	3.21	3.00	3.06	2.91	3.34

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
Decision making and citizen voice – Thinking about how decisions are made affecting [local area name] and surrounds, how much do you agree that:							
The local council informs residents of important developments	2.41	1.11	2.60	2.25	2.41	2.28	2.96
There are opportunities for your voice to be heard on issues that are important to you	2.55	1.09	2.54	2.57	2.72	2.33	3.01
Overall, I am satisfied with how decisions are made that affect [local area name]	2.47	1.09	2.68	2.35	2.47	2.32	2.88
Employment and business opportunities – Regarding employment and business opportunities in the local area of [local area name], how much do you agree that:							
There are good job opportunities	2.45	1.14	2.85	2.53	2.36	1.87	3.08
Local businesses are doing well	2.59	0.99	2.90	2.53	2.30	2.56	2.98
Overall, I am satisfied with employment and business opportunities in [local area name]	2.55	1.03	2.87	2.56	2.37	2.27	3.00
Community spirit – Thinking about community spirit in your local area, how much do you agree that:							
People can rely upon one another for help	3.68	0.99	3.73	3.59	3.81	3.54	3.87
People have friendly relationships	3.83	0.88	3.85	3.83	3.96	3.66	3.96
People can work together if there is a serious problem	4.06	0.85	4.07	4.02	4.21	3.93	4.12
Overall, I am satisfied with community spirit in the area	3.89	0.89	3.90	3.87	3.96	3.81	4.01
Community cohesion – Thinking about how inclusive the community is, how much do you agree that:							
Your community is welcoming of newcomers	3.51	1.03	3.49	3.51	3.64	3.42	3.78
Your community is tolerant of people with different views	3.23	1.00	3.21	3.28	3.26	3.18	3.50
Your local community is welcoming of people of different cultures	3.45	1.04	3.47	3.58	3.41	3.33	3.73
Overall, your community includes everyone no matter who they are	3.52	1.07	3.56	3.52	3.55	3.41	3.81
Community trust – Thinking about levels of trust in your local area, how much do you agree that:							
There are local community leaders I can trust	3.21	1.04	3.10	3.23	3.42	3.12	3.50
People that you see around [local area name] can generally be trusted	3.29	1.00	3.34	3.22	3.50	3.06	3.53
Your local council can be trusted	2.85	1.14	2.98	2.67	2.89	2.83	3.11
Overall, I am satisfied with levels of trust in my local area	3.31	0.98	3.46	3.21	3.35	3.16	3.53

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
Community participation – Thinking now about participating in community groups in [local area name] (like school, sport, craft and service groups), how much do you agree that:							
You regularly help out a local group as a volunteer (e.g., once a week)	2.95	1.45	2.71	3.05	3.07	3.04	3.16
You have attended several community events in the past year	3.41	1.37	3.31	3.60	3.48	3.25	3.80
You are a very active member of a local organisation or club	3.01	1.57	2.98	2.99	3.14	2.92	3.26
Overall, you participate regularly in a variety of community activities	3.04	1.42	3.00	2.91	3.24	3.00	3.35
Social interaction – Now we have some questions about everyday interactions with people, other than those you may live with. How much do you agree that you do the following with others regularly in [local area name]:							
Visit someone's home	3.16	1.31	3.15	3.41	3.22	2.84	3.28
Go out together socially	2.99	1.32	3.23	3.22	2.84	2.57	3.22
Speak or text on the phone	3.72	1.26	3.81	3.86	3.76	3.38	3.85
Overall, I am satisfied with the amount of my social interaction in the local area	3.76	1.12	3.69	3.88	3.82	3.66	3.92
Overall Community wellbeing – Thinking about overall community wellbeing in [local area name] and surrounds , how much do you agree that:							
This community is suitable for young children	3.75	1.05	3.83	3.87	3.85	3.40	4.09
This community is suitable for teenagers	3.05	1.13	3.18	3.24	3.23	2.42	3.40
This community is suitable for seniors	3.89	0.99	4.06	4.02	3.78	3.63	4.00
Overall, this local area offers a good quality of life	3.97	0.86	4.05	3.99	4.04	3.75	4.09
Overall, I am happy living in this local area	4.10	1.00	4.14	4.00	4.14	4.11	4.24
EXPECTED FUTURE COMMUNITY WELLBEING							
Expected future wellbeing – Imagining what it might be like in 3 years time, how much do you agree that:							
Overall, I will be happy living in this local area	3.75	1.19	3.79	3.70	3.75	3.77	3.88
Overall, this local area will offer a good quality of life	3.81	1.07	4.01	3.72	3.67	3.76	3.94
Over the next 3 years, do you think community wellbeing will:							
Decline	21.4%	n.a.	13.6%	21.8%	30.4%	21.9%	15.1%
Stay about the same	57.5%	n.a.	64.3%	55.7%	50.4%	57.6%	61.8%
Improve	21.1%	n.a.	22.1%	22.4%	19.2%	20.4%	23.0%

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma

COMMUNITY RESILIENCE AND ADAPTATION

Community resilience actions – Thinking about how your local community in [local area name] and surrounds is responding to CSG activities, how much do you agree that there is:

Good planning for future changes	2.71	1.13	2.90	2.86	2.43	2.60	2.95
Adequate leadership to deal with the changes	2.56	1.07	2.78	2.65	2.28	2.48	2.90
Sufficient access to relevant information	2.74	1.12	2.89	2.90	2.48	2.66	3.01
Sharing of resources, information, and learnings	2.70	1.05	2.81	2.90	2.45	2.61	2.95
Key people to help get things done	2.80	1.02	2.83	2.98	2.61	2.79	3.03
Perseverance to find solutions	2.87	1.04	2.88	3.13	2.63	2.84	3.02
The community supports its volunteers	3.53	1.04	3.57	3.64	3.51	3.36	3.68
The community gets involved	3.46	0.99	3.40	3.64	3.39	3.42	3.57
Overall, I am satisfied with the way the community is responding to the changes from CSG development	3.07	1.02	3.13	3.22	2.89	3.04	3.33

Collective efficacy – Now thinking about local residents, government, business and resource companies working together, how much do you agree that:

All these groups can work together to address problems associated with CSG development	2.98	1.14	3.16	3.01	2.88	2.82	3.31
All these groups can work together to take advantage of the opportunities associated with CSG development	3.07	1.11	3.20	3.19	2.85	2.99	3.34

Community coping – How much do you agree that [local area name] and surrounds

is coping with CSG activities	2.89	1.12	3.07	2.97	2.64	2.81	3.23
is adapting to CSG activities	3.03	1.06	3.18	3.18	2.82	2.91	3.35
is coping with the drought	2.98	1.09	3.08	2.94	3.07	2.77	3.16

Level of community adaptation – Which of the following best describes how [local area name] and surrounds is dealing with the CSG activities?

Resisting it	4.8%	n.a.	7.2%	3.3%	2.8%	5.2%	4.1%
Not coping	6.9%	n.a.	5.6%	3.9%	10.4%	8.3%	7.0%
Only just coping	39.2%	n.a.	38.0%	39.9%	35.3%	44.7%	28.0%
Adapting to the changes	44.9%	n.a.	43.0%	51.4%	47.6%	37.4%	54.1%
Changing into something different but better	4.1%	n.a.	6.1%	1.5%	3.9%	4.4%	6.9%

ATTITUDES AND PERCEPTIONS OF CSG ACTIVITIES

Perceived impacts - Thinking about CSG development, how concerned are you about the following:

Depletion of underground water	3.84	1.35	3.69	3.79	4.02	3.91	3.68
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2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chinchilla	Miles	Tara	Roma
Water contamination	3.83	1.38	3.73	3.81	3.92	3.91	3.68
Air contamination	3.26	1.38	3.15	3.11	3.31	3.51	2.80
The natural environment (e.g., state forests)	3.40	1.35	3.31	3.38	3.48	3.46	3.13
Farm property values	3.67	1.41	3.47	3.67	3.83	3.75	3.51
Risk of fire	3.06	1.42	2.76	3.07	3.01	3.53	2.69
Disposal of salts and brine	3.60	1.36	3.51	3.62	3.72	3.56	3.42
Dust, noise, and light pollution	3.14	1.35	3.04	3.07	3.16	3.35	2.81
Traffic on the roads	3.20	1.32	3.14	3.15	3.35	3.17	3.27
Health impacts	3.28	1.39	3.30	3.18	3.36	3.29	2.96
Cost of housing (i.e., renting or buying)	3.44	1.36	3.20	3.59	3.68	3.33	3.53
Community division over CSG development	3.26	1.13	3.05	3.36	3.31	3.38	3.14
Pressure on services and facilities	3.20	1.17	2.93	3.35	3.49	3.11	3.27
Overall, how concerned are you about potentially negative impacts	3.53	1.29	3.25	3.54	3.87	3.51	3.32
Potential impacts - Thinking about CSG development, how concerned are you about:							
Changes in CSG operators over time	3.36	1.29	3.07	3.43	3.49	3.56	3.27
Additional hydraulic fracturing fracking over time	3.69	1.33	3.48	3.75	3.75	3.83	3.39
CSG well integrity over time	3.57	1.31	3.41	3.55	3.75	3.64	3.38
CSG development extending into more farming areas	3.75	1.41	3.62	3.63	3.91	3.88	3.52
Overall, how concerned are you about possible future issues with CSG	3.61	1.29	3.47	3.69	3.69	3.61	3.46
Managing underground water - How much do you agree that any risks to underground water from CSG activities:							
Are understood by science	2.83	1.28	2.79	2.83	2.84	2.87	2.95
Are understood by the community	2.46	1.20	2.45	2.57	2.30	2.52	2.65
Are manageable	2.79	1.21	2.80	2.92	2.71	2.72	2.90
Are potentially catastrophic	3.38	1.34	3.26	3.30	3.70	3.26	3.17
Perceived local benefits - How much do you agree that CSG development provides significant local benefits for:							
Local employment	3.04	1.32	3.37	3.23	2.57	2.91	3.21
Opportunities for young people to stay in the region	2.89	1.27	3.22	3.08	2.52	2.65	3.08
Local business opportunities	2.98	1.20	3.36	2.96	2.61	2.85	3.27
Corporate support for local community activities (e.g. a CSG company sponsoring local clubs)	3.43	1.14	3.60	3.53	3.24	3.29	3.54
Additional local services and facilities	3.02	1.11	3.23	3.19	2.59	3.04	3.19
Overall, how much do you agree that CSG development brings significant benefits to the local community	2.95	1.25	3.29	3.07	2.48	2.88	3.20

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
Perceived societal benefits - How much do you agree that CSG extraction provides wider societal benefits:							
As a transition fuel between coal and renewable energy sources	2.90	1.09	3.04	3.00	2.61	2.91	3.09
For energy supply in Australia	3.03	1.25	3.08	3.04	3.01	2.98	3.13
For the wider Australian economy	3.21	1.12	3.28	3.20	3.17	3.16	3.29
Overall, CSG extraction in the region provides significant benefits for wider society	3.09	1.13	3.17	3.18	3.07	2.90	3.15
Distributional fairness - How much do you agree that							
You consider it fair to live near CSG development if you are compensated accordingly	3.29	1.28	3.22	3.47	3.42	3.03	3.47
You consider it fair to live near CSG development if your local council is compensated accordingly	2.67	1.32	2.52	2.78	2.85	2.58	3.08
Your community receives a fair share of the benefits from the CSG development	3.09	1.30	3.10	3.17	3.18	2.87	3.15
Procedural fairness - Thinking about how decisions are made about CSG development, how much do you agree that CSG companies:							
Listen to and respect the community's opinions	2.48	1.20	2.63	2.47	2.29	2.48	2.72
Inform residents of important developments	2.65	1.19	2.82	2.66	2.48	2.59	2.89
Give opportunities for people in your community to participate in the decisions made by local CSG companies	2.30	1.12	2.52	2.25	2.06	2.31	2.43
Are prepared to change practices in response to community sentiment	2.42	1.17	2.68	2.43	2.04	2.47	2.55
Quality of relationships - How much do you agree that CSG companies							
Respond to concerns and issues in a timely manner	2.45	1.13	2.63	2.46	2.18	2.48	2.66
Are accessible or easy to contact	2.72	1.19	2.83	2.81	2.58	2.61	2.82
Are open, honest and transparent	2.28	1.13	2.51	2.21	2.03	2.34	2.54
Engage in genuine two way dialogue	2.47	1.11	2.64	2.45	2.30	2.44	2.63
Formal governance - Thinking about how CSG companies are governed, how much do you agree that:							
Legislation and regulation can be counted upon to ensure that they do the right thing	2.52	1.19	2.74	2.55	2.28	2.44	2.74
Queensland government regulators are able to hold companies accountable for any breaches	2.65	1.30	2.79	2.71	2.56	2.50	2.97
CSG companies comply with regulations, permits and licences.	2.97	1.11	3.07	3.08	2.84	2.84	3.25

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chinchilla	Miles	Tara	Roma
CSG companies comply with land access agreements	2.96	1.16	3.08	3.01	2.87	2.82	3.32
Informal governance - Thinking about other government responses to CSG development, how much do you agree that:							
Your Regional Council listens to and advocates for local communities on issues around CSG development	2.58	1.08	2.70	2.62	2.52	2.40	2.95
Your council has good plans and strategic vision around CSG development	2.49	1.05	2.62	2.53	2.32	2.47	2.73
Queensland government regulators inform local communities of any issues with CSG activities as they arise	2.49	1.08	2.60	2.60	2.24	2.50	2.62
The Queensland government regulators listen to and responds to any community concerns	2.47	1.06	2.77	2.44	2.13	2.44	2.58
Trust in CSG companies - Thinking about local CSG companies, to what extent can you trust them:							
To act in the local community's best interests	2.48	1.14	2.71	2.52	2.16	2.45	2.62
To act responsibly	2.78	1.16	2.94	2.88	2.62	2.65	2.98
Trust their capability	2.80	1.17	2.93	2.94	2.69	2.59	2.94
Overall, to what extent can you trust CSG companies	2.54	1.12	2.77	2.62	2.30	2.39	2.74
Trust in State governing bodies - Thinking about state government bodies involved in overseeing CSG development, to what extent can you trust them:							
To act in the local community's best interests	2.36	1.06	2.69	2.46	1.94	2.24	2.53
To act responsibly	2.57	1.08	2.82	2.59	2.35	2.43	2.73
Trust their capability	2.51	1.06	2.71	2.51	2.30	2.43	2.64
Overall, to what extent can you trust state government bodies overseeing CSG development	2.45	1.05	2.67	2.49	2.18	2.40	2.56
COMMUNITY ACCEPTANCE							
Acceptance of CSG							
Thinking about CSG development in this region, how accepting are you of this CSG activity	3.10	1.17	3.23	3.20	3.02	2.90	3.41
Attitude to CSG							
Which of the following best describes your attitude to coal seam gas in this region:							
I reject it	9.3%	n.a.	10.7%	6.3%	9.9%	9.8%	6.6%
I tolerate it	34.2%	n.a.	31.7%	35.2%	31.5%	39.6%	20.6%
I accept it	30.6%	n.a.	27.5%	28.6%	34.0%	33.2%	38.3%
I approve of it	16.3%	n.a.	15.7%	22.6%	13.7%	13.1%	22.6%

2018 subregion results	Western Downs		Subregions (including Roma)				
	Mean	SD ¹	Dalby	Chin-chilla	Miles	Tara	Roma
I embrace it	9.7%	n.a.	14.4%	7.3%	10.8%	4.3%	11.9%
Feelings toward CSG -Thinking about CSG development in this region, how much do you agree you feel							
I feel pleased to have the coal seam gas industry in our region	2.76	1.19	2.85	2.88	2.61	2.67	3.08
When I look at what is happening around coal seam gas I feel optimistic	2.83	1.20	2.93	3.02	2.62	2.70	3.13
When I think about how much coal seam gas affects everyday life, it makes me angry	2.35	1.24	2.32	2.31	2.44	2.34	2.19
When I think about how things are changing because of coal seam gas I get worried	2.90	1.32	2.72	2.95	3.02	2.95	2.64
Information sources - How frequently do you use the following information sources to get your information about the local CSG industry							
Government sources	2.33	1.13	2.37	2.17	2.54	2.19	2.34
Research organisations	2.15	1.10	2.19	2.03	2.29	2.06	2.19
Anti-CSG groups	1.61	0.93	1.56	1.62	1.66	1.63	1.64
Pro-CSG groups	1.74	0.94	1.74	1.74	1.79	1.70	1.80
Industry sources	2.38	1.16	2.46	2.35	2.61	2.06	2.77
Local papers and radio	3.03	1.20	3.01	3.18	3.09	2.81	3.40
Social media (e.g. Facebook)	2.28	1.33	2.33	2.29	2.24	2.26	2.61
Word of mouth	3.17	1.16	3.15	3.26	3.29	2.98	3.42
Knowledge confidence - How much do you feel you know about?							
The local coal seam gas industry	3.09	1.19	2.95	3.36	3.42	2.64	3.25
How the gas is extracted	3.20	1.26	3.06	3.43	3.40	2.93	3.32
How underground water could be affected	3.37	1.25	3.14	3.55	3.73	3.12	3.49
Information need							
How much more information do you feel you need about the local CSG industry	3.39	1.41	3.20	3.41	3.23	3.82	3.39

¹ SD = standard deviation which may be thought of as a standard distance from the mean. Approximately two thirds of responses normally fall within one SD of the mean.

Appendix G Survey items results by year and region

Table 18 Survey item statistics for Western Downs region by Year (weighted data for all three years)

2014-2016-2018 results	Western Downs Region			2018 regions	
	2014	2016	2018	WD	EM
COMMUNITY WELLBEING					
Place attachment – Thinking about [local area name] and surrounds, how much do you agree with the following statements:					
I feel that I belong to this area	4.16	4.18	4.17	4.17 ^L	4.44 ^H
I am pleased to come back to the area, if I go away	4.15	4.17	4.16	4.16 ^L	4.37 ^H
Overall, I feel very attached to this local area	4.01	4.05	3.99	3.99 ^L	4.35 ^H
Personal safety – Now a few questions about personal safety. On a scale from 1 to 5, how much do you agree that:					
It is safe to be alone at home during the night	4.33	4.23	4.25	4.25 ^L	4.44 ^H
It is safe to walk alone outside at night	3.86	3.86	3.80	3.80 ^L	4.02 ^H
It is safe to leave the car on the side of the road at night	3.08	3.00	3.01	3.01 ^L	3.46 ^H
Overall, I feel safe living in the area	4.31 ^H	4.16 ^L	4.24	4.24 ^L	4.47 ^H
Income sufficiency – Thinking about your household income, how much do you agree that:					
Your income is enough for household expenses	3.62	3.73	3.64	3.64	3.67
Your income is enough for the lifestyle you enjoy	3.61	3.57	3.62	3.62	3.68
Your rent or mortgage repayments impact greatly on your household finances	3.28 ^H	3.31 ^H	2.80 ^L	2.80 ^L	3.08 ^H
Overall, I am satisfied that my income covers living expenses	3.74	3.86	3.76	3.76	3.88
Health – Thinking about your health and wellbeing, how satisfied are you with:					
Your diet and eating habits	3.96 ^H	3.82 ^L	3.80 ^L	3.80 ^H	3.63 ^L
Your exercise habits	3.47	3.43	3.42	3.42 ^H	3.20 ^L
Your physical health	3.77	3.66	3.75	3.75	3.63
Your mental health	4.22 ^H	4.08 ^L	4.08 ^L	4.08	4.02
Your job security, if applicable*	4.02 ^H	3.88	3.82 ^L	3.82	3.80
Your work-life balance*	3.56 ^H	3.56 ^H	3.37 ^L	3.37	3.53
Overall, how satisfied are you with your health and wellbeing	3.98	3.88	3.91	3.91	3.91
Services and facilities – Thinking of services and facilities for your local area, how satisfied are you with:					
Local schools	3.74 ^H	3.82 ^H	3.52 ^L	3.52 ^L	3.76 ^H
Child care facilities	3.30	3.39 ^H	3.19 ^L	3.19 ^L	3.45 ^H

	Western Downs Region			2018 regions	
2014-2016-2018 results	2014	2016	2018	WD	EM
Sports and leisure facilities	3.48	3.56 ^H	3.38 ^L	3.38 ^L	3.72 ^H
Cultural facilities	3.28	3.29	3.15	3.15 ^L	3.40 ^H
Shopping for food and everyday items	3.54	3.58	3.55	3.55	3.42
Other shopping (e.g., clothes and household goods)	2.64	2.69	2.70	2.70	2.81
Medical and health services	3.06 ^L	3.42 ^H	3.22 ^L	3.22 ^L	3.56 ^H
Community support services (e.g. meals on wheels, youth workers)	3.60 ^H	3.62 ^H	3.30 ^L	3.30 ^L	3.63 ^H
Overall, how satisfied are you with the services and facilities of [local area name]	3.43	3.51	3.46	3.46 ^L	3.67 ^H

Built environment – Thinking about [local area name]’s general appearance, how satisfied are you with the following:

Cleanliness in the town	3.63	3.59	3.63	3.63	3.77
Greenery and Parks in the town	3.45 ^L	3.58	3.61 ^H	3.61	3.63
Overall, how satisfied are you with the general appearance of the town	3.55	3.58	3.62	3.62	3.78

Roads – Thinking about the roads outside of [local area name], how satisfied are you with the:

Condition of the roads	2.26	2.40 ^H	2.22 ^L	2.22 ^L	2.72 ^H
Safety on the roads	2.35 ^L	2.74 ^H	2.66 ^H	2.66 ^L	3.09 ^H
Amount of traffic on roads	2.43 ^L	3.14 ^H	3.13 ^H	3.13 ^L	3.33 ^H
The roads overall	2.41 ^L	2.66 ^H	2.58 ^H	2.58 ^L	2.93 ^H

Environmental quality – Thinking about pollution in the general environment, how satisfied are you with the:

Level of dust	3.15 ^L	3.46 ^H	3.42 ^H	3.42	3.60
Level of noise	3.73 ^L	3.97 ^H	4.03 ^H	4.03	4.10
Overall quality of the general environment in [local area name]	3.63 ^L	4.15 ^H	3.94 ^M	3.94 ^L	4.14 ^H

Environmental management – Now thinking about the natural environment around [local area name], how satisfied are you with the management of the:

Quality of underground water for the future	2.43	2.51	2.59	2.59 ^L	2.95 ^H
Nature reserves for the future	2.96 ^L	3.13 ^H	3.08	3.08 ^L	3.38 ^H
Sustainability of local farming land for the future	2.74 ^L	3.01 ^M	3.20 ^H	3.20	3.24
The overall management of the natural environment for the future	2.85 ^L	3.01 ^H	3.06 ^H	3.06 ^L	3.34 ^H

Decision making and citizen voice – Thinking about how decisions are made affecting [local area name] and surrounds, how much do you agree that:

The local council informs residents of important developments	2.67 ^H	2.63 ^H	2.41 ^L	2.41 ^L	2.96 ^H
There are opportunities for your voice to be heard on issues that are important to you	2.81 ^H	2.78 ^H	2.55 ^L	2.55 ^L	3.01 ^H
Coal seam gas companies involve local residents in their decisions	2.47 ^H	2.27 ^L	2.30 ^L	2.30	2.43

	Western Downs Region			2018 regions	
2014-2016-2018 results	2014	2016	2018	WD	EM
Overall, I am satisfied with how decisions are made that affect [local area name]	2.59	2.62	2.47	2.47 ^L	2.88 ^H
Employment and business opportunities – Regarding employment and business opportunities in the local area of [local area name], how much do you agree that:					
There are good job opportunities	3.11 ^H	2.23 ^L	2.45 ^M	2.45 ^L	3.08 ^H
Local business have done well out of CSG development	3.08 ^H	2.18 ^L	2.59 ^M	2.59 ^L	2.98 ^H
Overall, I am satisfied with employment and business opportunities in [local area name]	3.08 ^H	2.27 ^L	2.55 ^M	2.55 ^L	3.00 ^H
Community spirit – Thinking about community spirit in your local area, how much do you agree that:					
People can rely upon one another for help	3.79	3.75	3.68	3.68 ^L	3.87 ^H
People have friendly relationships	3.84	3.86	3.83	3.83	3.96
People can work together if there is a serious problem	4.09	4.13	4.06	4.06	4.12
Overall, I am satisfied with community spirit in the area	3.85	3.88	3.89	3.89 ^L	4.01 ^H
Community cohesion – Thinking about how inclusive the community is, how much do you agree that:					
Your community is welcoming of newcomers	3.55	3.49	3.51	3.51 ^L	3.78 ^H
Your local community is welcoming of people of different cultures	3.54 ^H	3.30 ^L	3.45	3.45 ^L	3.73 ^H
Overall, your community includes everyone no matter who they are	3.65 ^H	3.48 ^L	3.52	3.52 ^L	3.81 ^H
Community trust – Thinking about levels of trust in your local area, how much do you agree that:					
There are local community leaders I can trust	3.32	3.26	3.21	3.21 ^L	3.50 ^H
People that you see around [local area name] can generally be trusted	3.35	3.41	3.29	3.29 ^L	3.53 ^H
Your local council can be trusted	3.05 ^H	2.98	2.85 ^L	2.85 ^L	3.11 ^H
Coal Seam Gas companies in your local area can be trusted	2.61 ^H	2.42 ^L	2.54	2.54	2.74
Overall, I am satisfied with levels of trust in my local area	3.24	3.19	3.31	3.31 ^L	3.53 ^H
Community participation – Thinking now about participating in community groups in [local area name] (like school, sport, craft and service groups), how much do you agree that:					
You regularly help out a local group as a volunteer (e.g., once a week)	2.94	2.99	2.95	2.95	3.16
You have attended several community events in the past year	3.37	3.52	3.41	3.41 ^L	3.80 ^H
You are a very active member of a local organisation or club	3.03	3.14	3.01	3.01	3.26
Overall, you participate regularly in a variety of community activities	3.03	3.17	3.04	3.04 ^L	3.35 ^H

2014-2016-2018 results	Western Downs Region			2018 regions	
	2014	2016	2018	WD	EM
Social interaction – Now we have some questions about everyday interactions with people, other than those you may live with. How much do you agree that you do the following with others regularly in [local area name]:					
Visit someone's home	3.26	3.24	3.16	3.16	3.28
Go out together socially	3.03	3.04	2.99	2.99 ^L	3.22 ^H
Speak or text on the phone	3.60	3.64	3.72	3.72	3.85
Overall, I am satisfied with the amount of my social interaction in the local area	3.84	3.78	3.76	3.76	3.92
Overall Community wellbeing – Thinking about overall community wellbeing in [local area name] and surrounds , how much do you agree that:					
This community is suitable for young children	3.88	3.88	3.75	3.75 ^L	4.09 ^H
This community is suitable for teenagers	3.24 ^H	3.30 ^H	3.05 ^L	3.05 ^L	3.40 ^H
This community is suitable for seniors	3.90	3.91	3.89	3.89	4.00
Overall, this local area offers a good quality of life	3.97	3.95	3.97	3.97	4.09
Overall, I am happy living in this local area	4.10	4.09	4.10	4.10	4.24
EXPECTED FUTURE COMMUNITY WELLBEING					
Expected future wellbeing – Imagining what it might be like in 3 years time, how much do you agree that:					
Overall, this local area will offer a good quality of life	3.52 ^L	3.67	3.81 ^H	3.81	3.94
Overall, I will be happy living in this local area	3.73	3.64	3.75	3.75	3.88
COMMUNITY RESILIENCE AND ADAPTATION					
Community resilience actions – Thinking about how your local community in [local area name] and surrounds is responding to CSG activities, how much do you agree that there is:					
Good planning for future changes	2.80	2.71	2.71	2.71 ^L	2.95 ^H
Adequate leadership to deal with the changes	2.84 ^H	2.84 ^H	2.56 ^L	2.56 ^L	2.90 ^H
Sufficient access to relevant information	2.94 ^H	2.94 ^H	2.74 ^L	2.74 ^L	3.01 ^H
Key people to help get things done	3.21 ^M	3.43 ^H	2.80 ^L	2.80 ^L	3.03 ^H
The community supports its volunteers	3.32 ^L	3.33 ^L	3.53 ^H	3.53	3.68
Perseverance to find solutions	3.30 ^H	3.27 ^H	2.87 ^L	2.87	3.02
Overall, I am satisfied with the way the community is responding to the changes from CSG development	3.23 ^M	3.37 ^H	3.07 ^L	3.07 ^L	3.33 ^H
Collective efficacy – Now thinking about local residents, government, business and resource companies working together, how much do you agree that:					
All these groups can work together to address problems associated with CSG development	3.17 ^H	3.08	2.98 ^L	2.98 ^L	3.31 ^H

	Western Downs Region			2018 regions	
2014-2016-2018 results	2014	2016	2018	WD	EM
All these groups can work together to take advantage of the opportunities associated with CSG development	3.24 ^H	3.15	3.07 ^L	3.07 ^L	3.34 ^H

Level of community adaptation – Which of the following best describes how [local area name] and surrounds is dealing with the CSG activities:

Resisting it	6.1%	5.2%	4.8%	4.8%	4.1%
Not coping	8.5%	7.3%	6.9%	6.9%	7.0%
Only just coping	33.3%	37.3%	39.2%	39.2%	28.0%
Adapting to the change	46.2%	45.5%	44.9%	44.9%	54.1%
Changing into something different but better	5.9%	4.7%	4.1%	4.1%	6.9%
Average from 1 = 'Resisting it' to 5 = 'Changing into something different but better'	3.37	3.37	3.37	3.37 ^L	3.53 ^H

ATTITUDES AND PERCEPTIONS OF CSG ACTIVITIES

Feelings toward CSG -Thinking about CSG development in this region, how much do you agree you feel

I feel pleased to have the coal seam gas industry in our region	2.96 ^H	2.79	2.76 ^L	2.76 ^L	3.08 ^H
When I look at what is happening around coal seam gas I feel optimistic	2.82 ^H	2.59 ^L	2.83 ^H	2.83 ^L	3.13 ^H
When I think about how much coal seam gas affects everyday life, it makes me angry	2.69 ^H	2.74 ^H	2.35 ^L	2.35	2.19
When I think about how things are changing because of coal seam gas I get worried	3.00	3.13 ^H	2.90 ^L	2.90 ^H	2.64 ^L

Attitude to CSG – Which of the following best describes your attitude to coal seam gas in this region:

I reject it	8.8%	12.4%	9.3%	9.3%	6.6%
I tolerate it	32.8%	33.9%	34.2%	34.2%	20.6%
I accept it	36.5%	34.4%	30.6%	30.6%	38.3%
I approve of it	14.2%	12.3%	16.3%	16.3%	22.6%
I embrace it	7.7%	6.9%	9.7%	9.7%	11.9%
Average from 1 = 'I reject it' to 5 = 'I embrace it'	2.79	2.67	2.83	2.83 ^L	3.13 ^H

Notes: Superscripts indicate significant differences: H higher; M middle; L lower. Table only includes items measured in 2014, 2016 and 2018; for extra items collected in 2018, see Appendix F.

Appendix H Tables of demographic differences

Regions

Table 19 Demographic differences: Mean scores based on Regions

Community wellbeing dimensions	Western Downs	eastern Maranoa
Personal safety	3.82^L	4.10^H
Income sufficiency	3.67	3.74
Health	3.72	3.65
Services and facilities	3.27^L	3.49^H
Town appearance	3.62	3.73
Roads	2.65^L	3.02^H
Environmental quality	3.80^L	3.94^H
Environmental management	2.98^L	3.23^H
Local decision making	2.57^L	2.99^H
Economic opportunities	2.53^L	3.02^H
Community cohesion	3.49^L	3.78^H
Local trust	3.27^L	3.52^H
Community participation	3.10^L	3.39^H
Community spirit	3.87	3.99
Social interaction	3.41	3.57
Overall community wellbeing	3.75^L	3.96^H
Expected future wellbeing	3.78	3.91
Place attachment	4.11^L	4.38^H
Community resilience	2.93^L	3.17^H

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Western Downs	eastern Maranoa
Perceived impacts	3.46^H	3.28^L
Perceived benefits	3.05	3.21
Distributional fairness	3.02^L	3.24^H
Procedural fairness	2.46	2.65
Relationship quality	2.48^L	2.66^H
Governance overall	2.58^L	2.80^H
Formal governance	2.77^L	3.07^H
Informal governance	2.51^L	2.72^H
Trust in CSG governing bodies	2.47	2.61
Trust in CSG companies	2.65	2.82
Knowledge confidence	3.22	3.35
Information need	3.39	3.39
Community attitudes and feelings toward CSG	3.03^L	3.30^H

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Subregion towns

Table 20 Demographic differences: Mean scores based on subregion

Community wellbeing dimensions	Dalby	Chinchilla	Miles / Wandoan	Tara	Western Downs
Personal safety	3.88^{MH}	3.40^L	4.16^H	3.83^M	3.82
Income sufficiency	3.85^H	3.79^H	3.54	3.44^L	3.67
Health	3.76	3.75	3.66	3.70	3.72
Services and facilities	3.61^H	3.41^M	3.02^L	2.93^L	3.27
Town appearance	3.61	3.64	3.72	3.50	3.62
Roads	2.58^{ML}	2.89^H	2.75^{MH}	2.36^L	2.65
Environmental quality	3.87	3.72	3.82	3.76	3.80
Environmental management	3.09	2.98	2.97	2.84	2.98
Local decision making	2.70	2.46	2.62	2.44	2.57
Economic opportunities	2.87^H	2.54^{MH}	2.34^{LM}	2.24^L	2.53
Community cohesion	3.51	3.53	3.53	3.39	3.49
Local trust	3.30	3.22	3.42	3.11	3.27
Community participation	3.00	3.14	3.23	3.05	3.10
Community spirit	3.89	3.83	3.99	3.74	3.87
Social interaction	3.47^H	3.59^H	3.41^H	3.11^L	3.41
Overall community wellbeing	3.85^H	3.82^H	3.81^H	3.46^L	3.75
Expected future wellbeing	3.90	3.71	3.71	3.76	3.78
Place attachment	4.05	4.17	4.21	3.99	4.11
Community resilience	3.04^H	3.06^H	2.73^L	2.84	2.93

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Dalby	Chinchilla	Miles / Wandoan	Tara	Western Downs
Perceived impacts	3.29	3.46	3.58	3.54	3.46
Perceived benefits	3.26^H	3.15	2.79^L	2.96^L	3.06
Distributional fairness	2.95	3.14	3.15	2.83	3.02
Procedural fairness	2.66^H	2.45	2.22^L	2.46	2.46
Relationship quality	2.65	2.48	2.27	2.47	2.48
Governance overall	2.77^H	2.63^H	2.38^L	2.49^L	2.58
Formal governance	2.92	2.84	2.64	2.65	2.77
Informal governance	2.67^H	2.55	2.31^L	2.45	2.51
Trust in CSG governing bodies	2.72^H	2.51^H	2.19^L	2.38^L	2.47
Trust in CSG companies	2.84^H	2.74	2.44^L	2.52^L	2.65
Knowledge confidence	3.05^L	3.44^H	3.52^H	2.89^L	3.22
Information need	3.20^L	3.41^L	3.23^L	3.82^H	3.39
Community attitudes and feelings toward CSG	3.13	3.11	2.92	2.94	3.03

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

In-town and Out-of-town

Table 21 Demographic differences: Mean scores based on living In-town and Out-of-town

Community wellbeing dimensions	In-town	Out-of-town	Western Downs
Personal safety	3.77	3.87	3.82
Income sufficiency	3.71	3.64	3.67
Health	3.74	3.70	3.72
Services and facilities	3.37^H	3.18^L	3.27
Town appearance	3.60	3.64	3.62
Roads	2.78^H	2.52^L	2.65
Environmental quality	3.77	3.83	3.80
Environmental management	3.09	2.88	2.98
Local decision making	2.53	2.60	2.57
Economic opportunities	2.53	2.53	2.53
Community cohesion	3.58	3.41	3.49
Local trust	3.37^H	3.17^L	3.27
Community participation	3.14	3.06	3.10
Community spirit	3.96^H	3.78^L	3.87
Social interaction	3.58^H	3.24^L	3.41
Overall community wellbeing	3.84^H	3.66^L	3.75
Expected future wellbeing	3.78	3.78	3.78
Place attachment	4.14	4.07	4.11
Community resilience	3.04^H	2.82^L	2.93

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	In-town	Out-of-town	Western Downs
Perceived impacts	3.25^L	3.65^H	3.46
Perceived benefits	3.17^H	2.94^L	3.06
Distributional fairness	3.17^H	2.86^L	3.02
Procedural fairness	2.61^H	2.32^L	2.46
Relationship quality	2.60^H	2.36^L	2.48
Governance overall	2.74^H	2.44^L	2.58
Formal governance	2.96^H	2.60^L	2.77
Informal governance	2.60^H	2.42^L	2.51
Trust in CSG governing bodies	2.65^H	2.29^L	2.47
Trust in CSG companies	2.79^H	2.52^L	2.65
Knowledge confidence	3.16	3.29	3.22
Information need	3.16	3.62^H	3.39
Community attitudes and feelings toward CSG	3.27^H	2.81^L	3.03

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Age

Table 22 Demographic differences: Mean scores based on age

Community wellbeing dimensions	Less than 35 years	35 to 54 years	55 + years	Western Downs
Personal safety	3.74	3.85	3.86	3.82
Income sufficiency	3.81	3.65	3.60	3.67
Health	3.72	3.57^L	3.87^H	3.72
Services and facilities	3.11^L	3.16^L	3.50^H	3.27
Town appearance	3.54	3.58	3.71	3.62
Roads	2.54	2.59	2.78	2.65
Environmental quality	3.85	3.75	3.81	3.80
Environmental management	3.14	2.93	2.92	2.98
Local decision making	2.47	2.59	2.63	2.57
Economic opportunities	2.61	2.51	2.49	2.53
Community cohesion	3.43	3.50	3.54	3.49
Local trust	3.31	3.20	3.30	3.27
Community participation	3.03	3.16	3.10	3.10
Community spirit	3.89	3.84	3.87	3.87
Social interaction	3.65	3.29	3.34	3.41
Overall community wellbeing	3.67	3.67^L	3.89^H	3.75
Expected future wellbeing	3.62	3.73	3.94	3.78
Place attachment	3.79	4.03	4.41	4.11
Community resilience	3.07	2.81	2.93	2.93

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Less than 35 years	35 to 54 years	55 + years	Western Downs
Perceived impacts	3.11^L	3.62^H	3.56^H	3.46
Perceived benefits	3.32^H	2.99^L	2.92^L	3.06
Distributional fairness	3.26^H	3.05^H	2.80^L	3.02
Procedural fairness	2.70	2.33	2.41	2.46
Relationship quality	2.69	2.38	2.42	2.48
Governance overall	2.89	2.50	2.43	2.58
Formal governance	3.26^H	2.63^L	2.55^L	2.77
Informal governance	2.66	2.47	2.43	2.51
Trust in CSG governing bodies	2.75^H	2.41^L	2.32^L	2.47
Trust in CSG companies	3.00^H	2.53^L	2.51^L	2.65
Knowledge confidence	3.25	3.37^H	3.06^L	3.22
Information need	3.17	3.40	3.55	3.39
Community attitudes and feelings toward CSG	3.37^H	2.92^L	2.89^L	3.03

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Gender

Table 23 Demographic differences: Mean scores based on gender

Community wellbeing dimensions	Male	Female	Western Downs
Personal safety	4.00^H	3.64^L	3.82
Income sufficiency	3.75	3.60	3.67
Health	3.72	3.72	3.72
Services and facilities	3.36^H	3.19^L	3.27
Town appearance	3.72^H	3.52^L	3.62
Roads	2.68	2.62	2.65
Environmental quality	3.90^H	3.70^L	3.80
Environmental management	3.06	2.91	2.98
Local decision making	2.60	2.53	2.57
Economic opportunities	2.69^H	2.37^L	2.53
Community cohesion	3.48	3.51	3.49
Local trust	3.25	3.29	3.27
Community participation	2.86^L	3.35^H	3.10
Community spirit	3.82	3.91	3.87
Social interaction	3.24^L	3.58^H	3.41
Overall community wellbeing	3.80	3.71	3.75
Expected future wellbeing	3.78	3.78	3.78
Place attachment	4.00	4.22	4.11
Community resilience	2.89	2.97	2.93

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Male	Female	Western Downs
Perceived impacts	3.40	3.52	3.46
Perceived benefits	3.04	3.07	3.06
Distributional fairness	3.12	2.90	3.02
Procedural fairness	2.39	2.53	2.46
Relationship quality	2.39	2.58	2.48
Governance overall	2.56	2.61	2.58
Formal governance	2.73	2.82	2.77
Informal governance	2.51	2.50	2.51
Trust in CSG governing bodies	2.44	2.51	2.47
Trust in CSG companies	2.59	2.72	2.65
Knowledge confidence	3.47^H	2.97^L	3.22
Information need	3.40	3.38	3.39
Community attitudes and feelings toward CSG	3.03	3.03	3.03

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Income level

Table 24 Demographic differences: Mean scores based on household income

Community wellbeing dimensions	Less than \$40,00	Between \$40,000 and \$80,000	\$80,000 or more	Western Downs
Personal safety	3.82	3.83	3.85	3.82
Income sufficiency	3.13^L	3.65^M	4.11^H	3.67
Health	3.75	3.68	3.73	3.72
Services and facilities	3.19	3.27	3.30	3.27
Town appearance	3.68^H	3.78^H	3.45^L	3.62
Roads	2.67	2.77	2.54	2.65
Environmental quality	3.75	3.86	3.78	3.80
Environmental management	2.82^L	3.08^H	3.05	2.98
Local decision making	2.47^L	2.76^H	2.52	2.57
Economic opportunities	2.32^L	2.60^H	2.63	2.53
Community cohesion	3.31^L	3.66^H	3.55	3.49
Local trust	3.25	3.45	3.21	3.27
Community participation	2.89^L	3.09	3.33^H	3.10
Community spirit	3.80	4.00	3.86	3.87
Social interaction	3.16^L	3.48^H	3.61	3.41
Overall community wellbeing	3.68	3.81	3.77	3.75
Expected future wellbeing	3.66	3.92	3.78	3.78
Place attachment	4.07	4.07	4.21	4.11
Community resilience	2.85	3.07	2.91	2.93

Note: 8.6% of respondents declined to answer this question about household income; Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Less than \$40,00	Between \$40,000 and \$80,000	\$80,000 or more	Western Downs
Perceived impacts	3.54^H	3.72^H	3.25^L	3.46
Perceived benefits	2.92	3.05	3.18	3.06
Distributional fairness	2.95	2.92	3.11	3.02
Procedural fairness	2.35	2.44	2.52	2.46
Relationship quality	2.38	2.51	2.54	2.48
Governance overall	2.41^L	2.64^H	2.68^H	2.58
Formal governance	2.59^L	2.78	2.94^H	2.77
Informal governance	2.40	2.63	2.52	2.51
Trust in CSG governing bodies	2.26^L	2.53^H	2.60^H	2.47
Trust in CSG companies	2.55	2.64	2.76	2.65
Knowledge confidence	2.90^L	3.17^H	3.56^H	3.22
Information need	3.51^H	3.67^H	3.13^L	3.39
Community attitudes and feelings toward CSG	2.89^L	2.89^L	3.29^H	3.03

Note: 8.6% of respondents declined to answer this question about household income; Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Farm ownership

Table 25 Demographic differences: Mean scores based on farm ownership, Western Downs region 2018

Community wellbeing dimensions	No	Yes	Western Downs
Personal safety	3.69^L	4.05^H	3.82
Income sufficiency	3.59	3.82	3.67
Health	3.71	3.74	3.72
Services and facilities	3.29	3.25	3.27
Town appearance	3.57	3.70	3.62
Roads	2.68	2.59	2.65
Environmental quality	3.75	3.89	3.80
Environmental management	3.04	2.88	2.98
Local decision making	2.51	2.67	2.57
Economic opportunities	2.46	2.65	2.53
Community cohesion	3.46	3.56	3.49
Local trust	3.24	3.33	3.27
Community participation	3.04	3.20	3.10
Community spirit	3.86	3.87	3.87
Social interaction	3.43	3.37	3.41
Overall community wellbeing	3.71	3.82	3.75
Expected future wellbeing	3.67	3.97^H	3.78
Place attachment	3.98	4.33^H	4.11
Community resilience	3.00^H	2.80	2.93

Note: only 35 indigenous respondents in the sample; Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	No	Yes	Western Downs
Perceived impacts	3.30^L	3.72^H	3.46
Perceived benefits	3.10	2.98	3.06
Distributional fairness	3.12	2.84	3.02
Procedural fairness	2.60^H	2.24^L	2.46
Relationship quality	2.56^H	2.34^L	2.48
Governance overall	2.71^H	2.37^L	2.58
Formal governance	2.93^H	2.51^L	2.77
Informal governance	2.57	2.40	2.51
Trust in CSG governing bodies	2.64^H	2.19^L	2.47
Trust in CSG companies	2.79^H	2.42^L	2.65
Knowledge confidence	3.08^L	3.47^H	3.22
Information need	3.32	3.51	3.39
Community attitudes and feelings toward CSG	3.23^L	2.70^H	3.03

Active leases

Table 26 Demographic differences: Mean scores based on active CSG leases, Western Downs and eastern Maranoa, 2018

Community wellbeing dimensions	Farmers with active leases	Other farmers	Western Downs
Personal safety	4.06	4.12	3.82
Income sufficiency	3.94	3.81	3.67
Health	3.74	3.75	3.72
Services and facilities	3.35	3.27	3.27
Town appearance	3.81	3.67	3.62
Roads	2.70	2.61	2.65
Environmental quality	3.74	3.98	3.80
Environmental management	2.89	2.93	2.98
Local decision making	2.85	2.64	2.57
Economic opportunities	2.77	2.76	2.53
Community cohesion	3.44	3.65	3.49
Local trust	3.38	3.37	3.27
Community participation	3.51	3.20	3.10
Community spirit	3.93	3.89	3.87
Social interaction	3.49	3.36	3.41
Overall community wellbeing	3.91	3.85	3.75
Expected future wellbeing	4.07	3.95	3.78
Place attachment	4.55	4.31	4.11
Community resilience	2.87	2.81	2.93

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher); Farmers with active leases and other farmers come from both the Western Downs and eastern Maranoa regions

Perceptions and attitudes about CSG and the sector	Farmers with active leases	Other farmers	Western Downs
Perceived impacts	3.54	3.73	3.46
Perceived benefits	3.07	2.96	3.06
Distributional fairness	2.96	2.83	3.02
Procedural fairness	2.31	2.20	2.46
Relationship quality	2.35	2.33	2.48
Governance overall	2.35	2.38	2.58
Formal governance	2.59	2.51	2.77
Informal governance	2.31	2.43	2.51
Trust in CSG governing bodies	2.14	2.20	2.47
Trust in CSG companies	2.49	2.41	2.65
Knowledge confidence	3.62	3.40	3.22
Information need	3.52	3.56	3.39
Community attitudes and feelings toward CSG	2.91	2.69	3.03

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher); Farmers with active leases and other farmers come from both the Western Downs and eastern Maranoa regions

Comparisons QLD and NSW

Table 27 Comparisons QLD and NSW: Mean scores comparing Western Downs region, Eastern Maranoa, and Narrabri shire

Community wellbeing dimensions	Western Downs 2018	eastern Maranoa 2018	Narrabri shire 2017
Personal safety	3.82^L	4.10^H	4.16 ^H
Income sufficiency	3.67	3.74	3.93 ^H
Health	3.72	3.65	3.90 ^H
Services and facilities	3.27^L	3.49^H	3.48 ^L
Town appearance	3.62	3.73	3.75 ^H
Roads	2.65^L	3.02^H	3.23 ^H
Environmental quality	3.80^L	3.94^H	3.90
Environmental management	2.98^L	3.23^H	3.31 ^H
Local decision making	2.57^L	2.99^H	3.00 ^L
Economic opportunities	2.53^L	3.02^H	3.07 ^H
Community cohesion	3.49^L	3.78^H	3.73 ^H
Local trust	3.27^L	3.52^H	3.69 ^H
Community participation	3.10^L	3.39^H	3.40 ^H
Community spirit	3.87	3.99	4.26 ^H
Social interaction	3.41	3.57	3.66 ^H
Overall community wellbeing	3.75^L	3.96^H	3.96 ^H
Expected future wellbeing	3.78	3.91	3.81
Place attachment	4.11^L	4.38^H	4.42 ^H
Community resilience	2.93^L	3.17^H	3.04 ^L

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; H=higher)

Perceptions and attitudes about CSG and the sector	Western Downs 2018	eastern Maranoa 2018	Narrabri shire 2017
Perceived impacts	3.46^H	3.28^L	3.50
Perceived benefits	3.05	3.21	3.30
Distributional fairness	3.02^L	3.24^H	2.87
Procedural fairness	2.46	2.65	2.68
Relationship quality	2.48^L	2.66^H	2.76
Governance overall	2.58^L	2.80^H	3.04
Formal governance	2.77^L	3.07^H	2.90
Informal governance	2.51^L	2.72^H	3.14
Trust in CSG governing bodies	2.47	2.61	3.13
Trust in CSG companies	2.65	2.82	2.82
Knowledge confidence	3.22	3.35	2.91
Information need	3.39	3.39	NA
Community attitudes and feelings toward CSG	3.03^L	3.30^H	2.79

Note: Bold font indicates a significant difference; Means with different superscript letters are significantly different (L = lower; M = Middle; H=higher)

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