



Community wellbeing and adapting to coal seam gas: Survey highlights and key messages

The Western Downs region in Queensland, Australia

This communique highlights key findings from the 2016 CSIRO Community Wellbeing and Responding to Change survey, changes between 2016 and 2014, and implications for community, industry, and government stakeholders involved with Coal Seam Gas (CSG) development.

Key messages describe lessons learned from investigating wellbeing over four years in this region – a period of rapid economic development associated with the construction phase of the industry ending with local economic slowdown post-construction.

KEY FINDINGS FROM THE SURVEY

- **Community wellbeing** – Even though some aspects of wellbeing decreased and others improved, overall community wellbeing in the Western Downs region in 2016 remained robust and similar to 2014.
- **Community adaptation** – Perceptions of community adaptation to CSG activities were at modest levels and remained about the same between 2014 and 2016 in the Western Downs, though residents from Roma indicated higher perceptions of adaptation.
- **Attitudes and feelings** – Compared to 2014, attitudes and feelings toward CSG development in the region were similar though there was a tendency to being more negative in 2016. On average, results indicated residents had ‘luke-warm’ views towards the industry.

KEY MESSAGES FROM THE RESEARCH

- Focus resources on underlying drivers of wellbeing to strengthen and maintain community wellbeing
- Direct strategies and activities to those areas that contribute to high community functioning and adaptation
- Recognise and respect the differences in how residents view and experience gas development
- Continue improving landholder relationships with gas
- Mitigate the impacts of future ups and downs of the industry in local towns
- Avoid over-investment in housing
- Water is still the main issue
- Share information to improve adaptive strategies

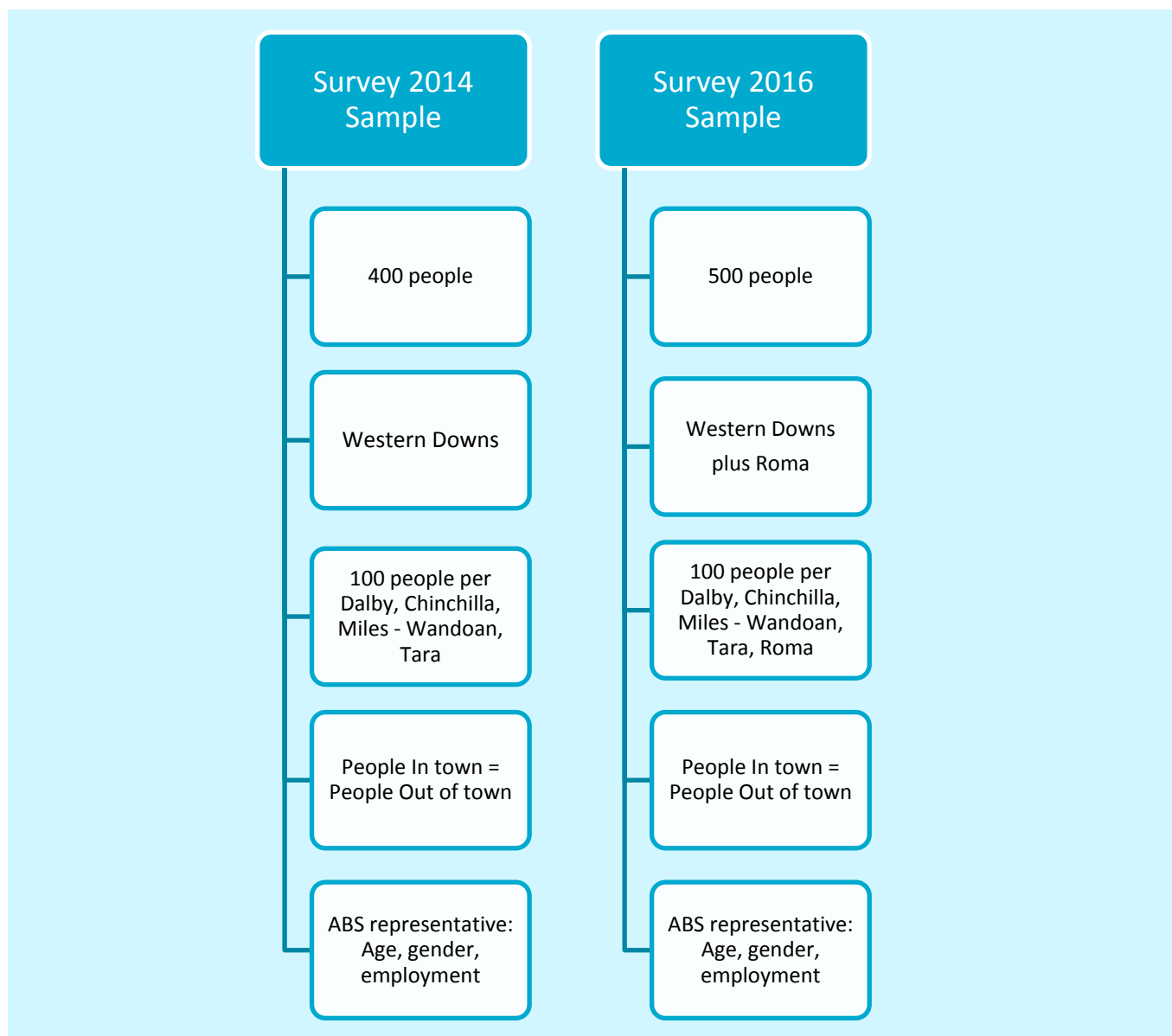
The survey

What we did

In February 2014 and 2016 we conducted a telephone survey of 400 residents in the Western Downs region, plus an extra 100 residents around Roma in 2016, for comparison.

In 2014 the CSG industry was still in its construction phase of development and in 2016 the industry was in its early operations phase.

The survey sample was randomly selected and we used quotas to ensure we had sufficient representation of participants from communities across the region, evenly split between those who lived out of town and in town.



What we measured

1. **Community wellbeing** – satisfaction with 15 different dimensions of community wellbeing
The 15 dimensions were community spirit, community cohesion, community trust, community participation, social interactions, personal safety, income sufficiency, health, jobs and business opportunities, environmental quality, services and facilities, the built environment, roads, decision making and citizen voice, environmental management
2. **Expectations of future community wellbeing**– perceptions of living in their local area in three years time
3. **Community adaptation to CSG development** – perceptions of community actions and responses to CSG activities
4. **Attitudes and feelings towards CSG development** – levels of acceptance and indicators of feelings, both positive and negative, toward CSG development in their region

This involved 130 questions and a 30 minute telephone survey.

Figure 1 The 15 dimensions of community wellbeing grouped into six domains



Community wellbeing

In 2016 overall community wellbeing was still very robust in the Western Downs region. It was very similar to 2014 despite satisfaction with some dimensions decreasing. These decreases were offset by improvements in other aspects of wellbeing.

KEY POINTS

- Overall community wellbeing in the Western Downs region was favourable and remained relatively unchanged between 2014 and 2016.
- The biggest change in wellbeing in 2016 was the decrease in satisfaction with job and employment opportunities.
- The biggest improvements were in satisfaction with roads and the quality of the environment (e.g., dust and noise), though residents were still dissatisfied with these two dimensions.
- On average, people who lived in-town reported higher levels of wellbeing than those who lived out-of-town.
- Most people expected their future community wellbeing to stay the same (57% expect it to stay the same, 29% to decline, and 14% to improve)

Figure 2 shows the perceptions of each of these dimensions in 2014 and 2016. Dimensions rated unfavourably are near the centre of the graph (1 out of 5) and those rated favourably are near the perimeter (5 out of 5). The neutral point is 3 out of 5. Thus, the top left quadrant shows the dimensions that were seen most positively; those in the bottom two quadrants are lower but still on or above the neutral point, but those in the top right quadrant were not perceived to be satisfactory.

Figure 2 Community wellbeing dimensions: 2014 and 2016



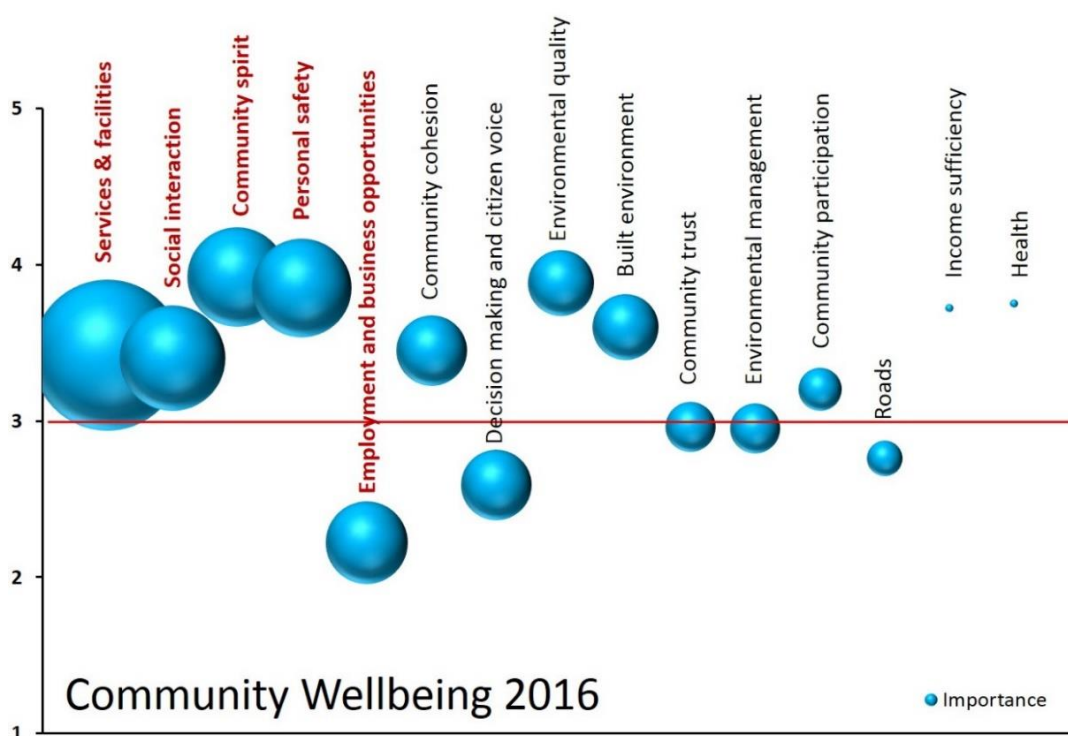
Note: * denotes a significant difference between 2014 and 2016

Which community wellbeing dimensions are most important?

The dimensions of community wellbeing that rated most favourably or most unfavourably are not necessarily the most important dimensions of community wellbeing in terms of contributing to an overall sense that a community offers a good quality of life for its residents. Therefore, it is important to identify which dimensions are the underlying drivers of wellbeing within the community to help inform any community, industry or government programs, which aim to improve wellbeing.

In 2016, the most important drivers of a sense of wellbeing in the community were **services and facilities**; social aspects of community such as **social interactions, community spirit, and feeling safe**; and satisfaction with **jobs and business opportunities**. When people felt these aspects of their community were strong they viewed their community as a great place to live and one that offers a good quality of life to all ages. However, jobs and business opportunities were viewed as unsatisfactory in 2016 in the Western Downs⁴.

Figure 3 Community wellbeing dimensions 2016 ordered according to importance



Notes:

1. Red font denotes the most important, statistically significant predictors of community wellbeing.
2. The size of the bubbles indicates the relative level of importance of that dimension to community wellbeing.
3. The height of the bubbles indicates level of satisfaction with dimension on a score from 1 to 5 where 1 is the least and 5 is the most satisfied
4. A score below 3 is an unsatisfactory perception

Differences across the region

On average, across the region people who live in town reported higher levels of wellbeing than those who live out of town; although, this was particularly driven by the towns of Miles and Tara. People who lived out of town in Miles and Tara had lower ratings of community wellbeing than those living in town. Whereas, in Dalby and Chinchilla, there were no statistical differences between those who live in town and those who live out of town.

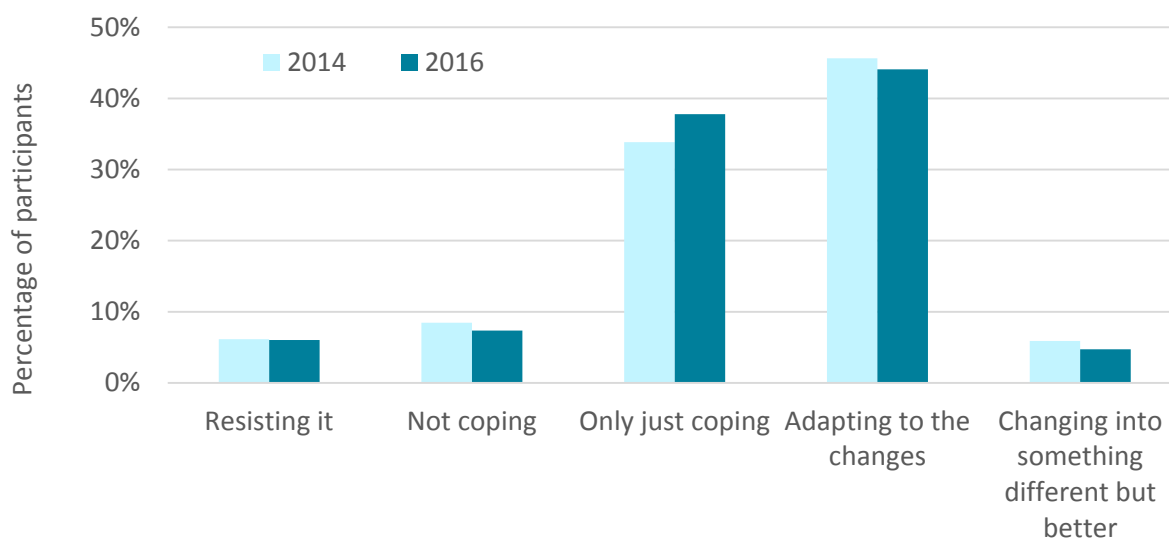
Around Chinchilla, community wellbeing declined significantly in 2016 compared to 2014; even so, it remained robust. Dalby and Miles stayed about the same. In Tara, there appeared to be improved community wellbeing compared to 2014, though this increase was not statistically significant.

Community Adaption

Perceptions of adapting to CSG

Residents' perceptions of community adaptation to CSG activities were at modest levels and showed no significant difference between 2014 and 2016. The most common perception was that their community was adapting (44%), but there was also a considerable percentage (38%) who thought their community was only just coping. Even though people's perceptions of coping and adapting were relatively unchanged, it is important to consider that in the intervening two years of the survey the region had experienced very different economic conditions.

Figure 4 Community perceptions of adapting to CSG development: 2014 and 2016



Note: Differences between 2014 and 2016 were not significantly different

Indicators that a community is adapting

The survey showed that when people felt their community functioning was high they perceived their community as adapting and coping well with CSG. They also felt more optimistic going forward. Community functioning comprises a bundle of factors that in combination indicate how well a community is working.

KEY POINTS

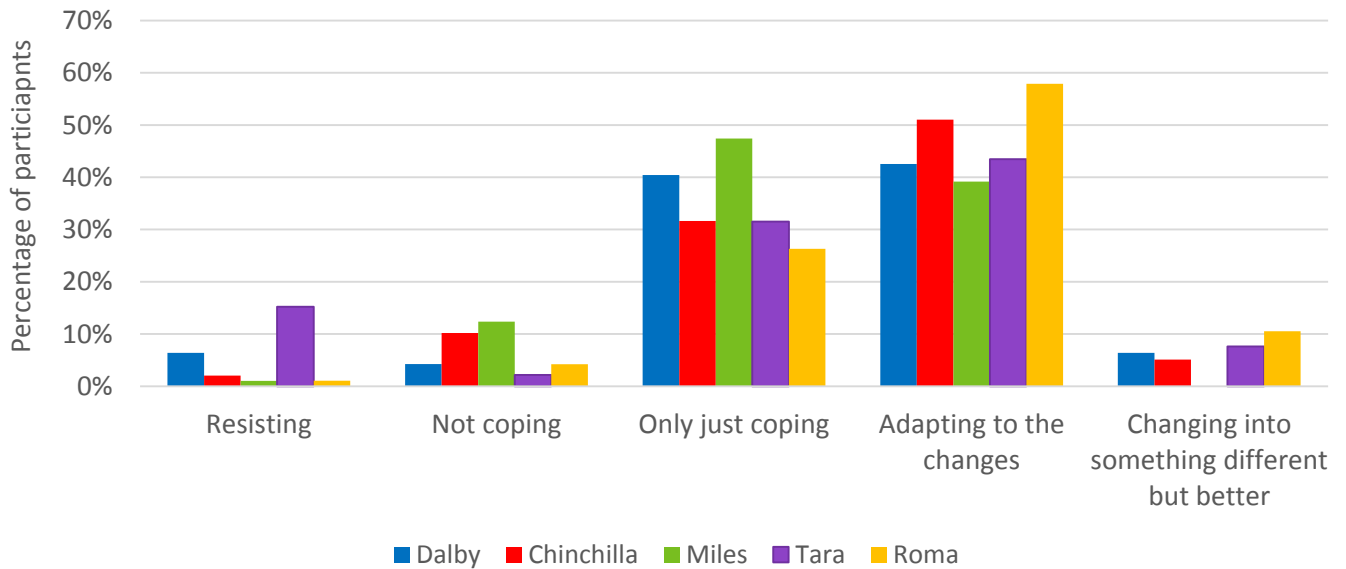
High community functioning is high when there is

- ✓ good planning and leadership
- ✓ access to relevant information
- ✓ community is committed (can persevere, support its volunteers and gets involved)
- ✓ strong collective efficacy beliefs that the community can work together with government and industry to address problems and make the most of opportunities
- ✓ community trust is high
- ✓ people feel listened to and heard
- ✓ employment and business opportunities are good the environment is being managed well for the future

Differences in community adaptation across the region in 2016

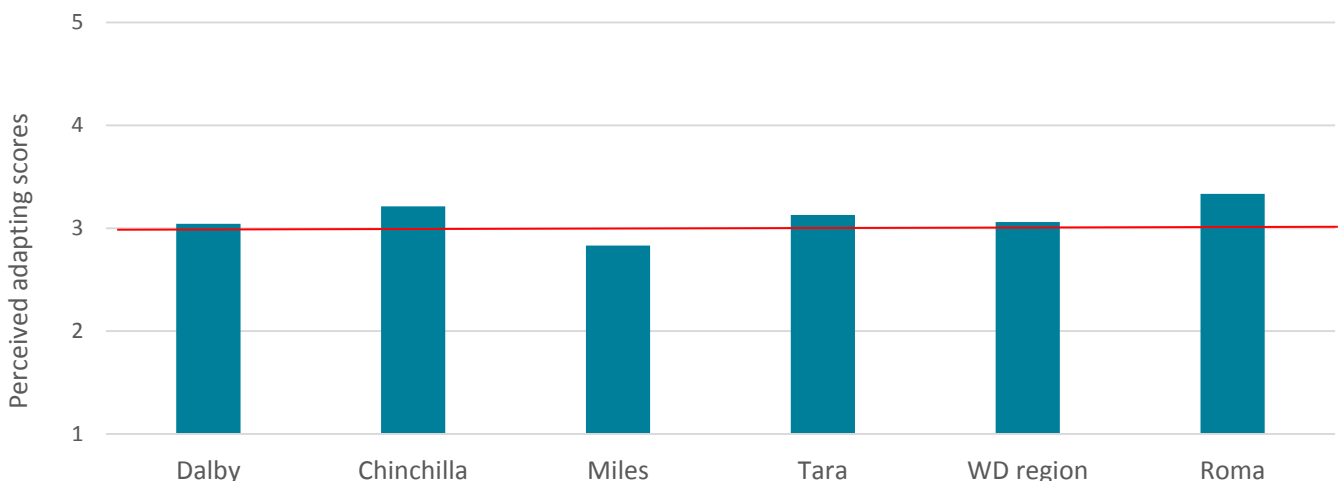
There were pockets across the region where a considerable proportion of residents indicated their community was only just coping or resisting. By comparison, a higher proportion of residents in Roma felt their community was adapting to the changes, as shown in Figure 5.

Figure 5 Perceptions of community adaptation to CSG development in 2016: Differences among sub-regions



In addition, residents were also asked how much they agreed their local area was adapting to CSG activities. The subregions in the Western Downs were not significantly different from each other. However, the score for Roma was significantly higher than for Miles. This can also be seen in Figure 5 with a higher percentage of residents around Miles saying it was not or only just coping and no residents saying Miles was changing into something different but better.

Figure 6 Perceptions of how well the local community was adapting to CSG activities: 2016

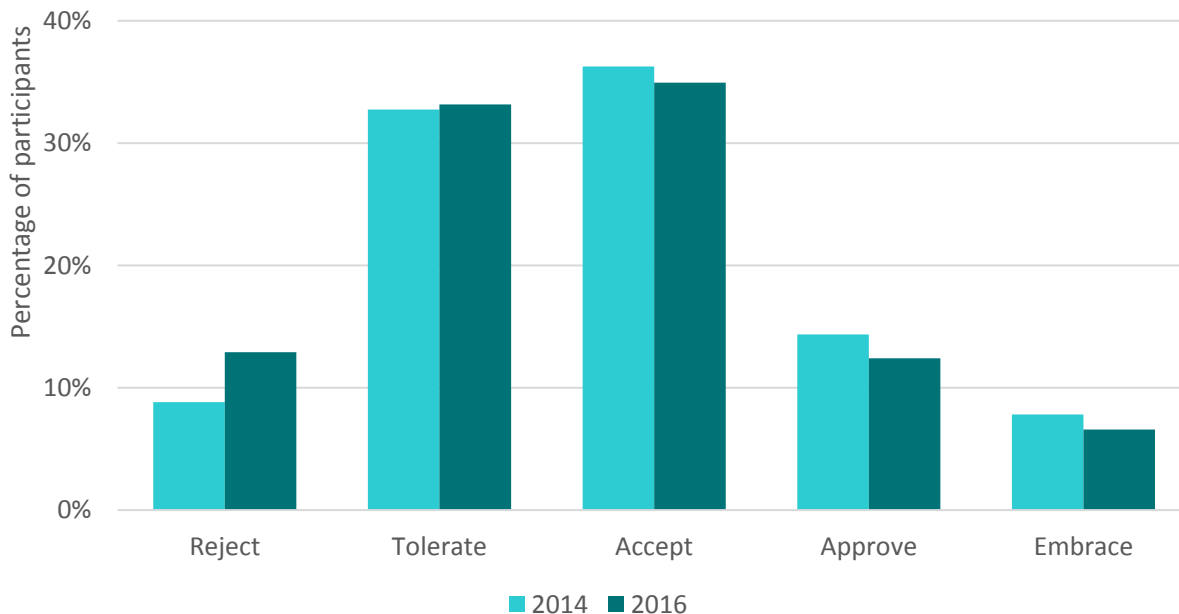


Note: A score below 3 is an unsatisfactory perception

Attitudes and Feelings

In 2016, there was a range of views towards CSG development. Most people tolerated, accepted, or approved of CSG development, while smaller proportions of residents either rejected or embraced CSG. Compared to 2014, attitudes were similar though there was a tendency to being more negative in 2016.

Figure 7 Attitudes towards CSG development in the Western Downs



KEY POINTS

In 2016, residents of the Western Downs region were asked about their views towards CSG

- 13% of people rejected CSG compared to 9% in 2014
- 7% of people embraced CSG compared to 8% in 2014
- 80% of people tolerated, accepted or approved CSG
 - 33% tolerated gas
 - 35% accepted gas
 - 12% approved of gas
- People's views differed between towns
- People's views differed based on where they live
 - Those who lived 'out-of-town' felt negative on average towards CSG development
 - Those who lived 'in town' felt neutral on average towards CSG development

WHAT CONTRIBUTES TO MORE POSITIVE ATTITUDES TOWARDS CSG?

- When **trust** in CSG companies is high
- When people feel they are **being listened to** and **can have a say**
- When **community functioning** is high – such as **good employment and business opportunities**, getting **access to information**, good **local planning** and **leadership**
- When people feel satisfied that the **environment** is being managed well for the future, especially groundwater

Differences based on where people live

Residents who lived in-town felt more positive about CSG development than those who lived 'out-of-town'. However feelings in-town became less positive in 2016 compared to 2014. Different views also exist among different towns.

Figure 8 Attitude towards CSG development in the Western Downs region: 2014 and 2016

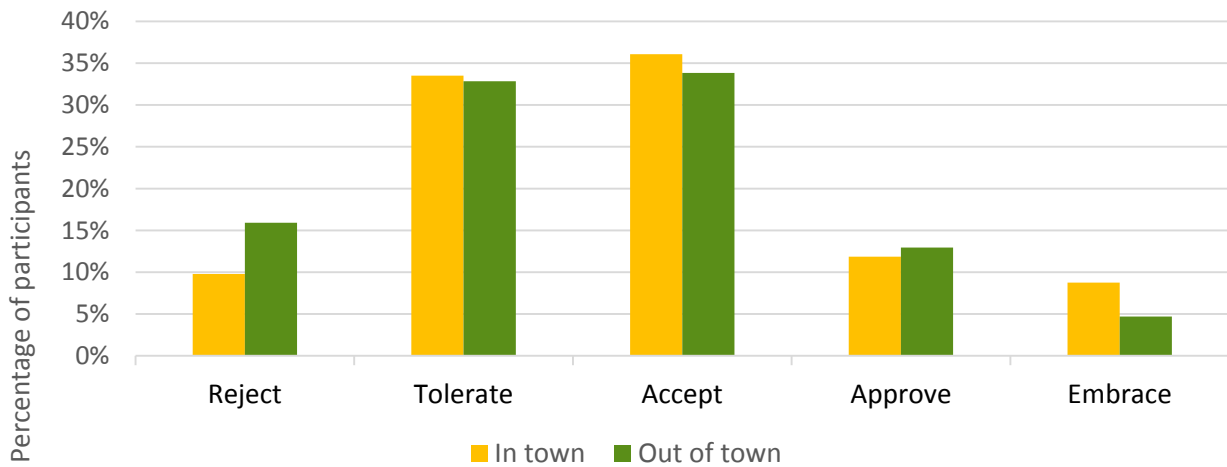


Figure 9 Feelings toward CSG development by residents out-of-town and in-town: 2014 and 2016

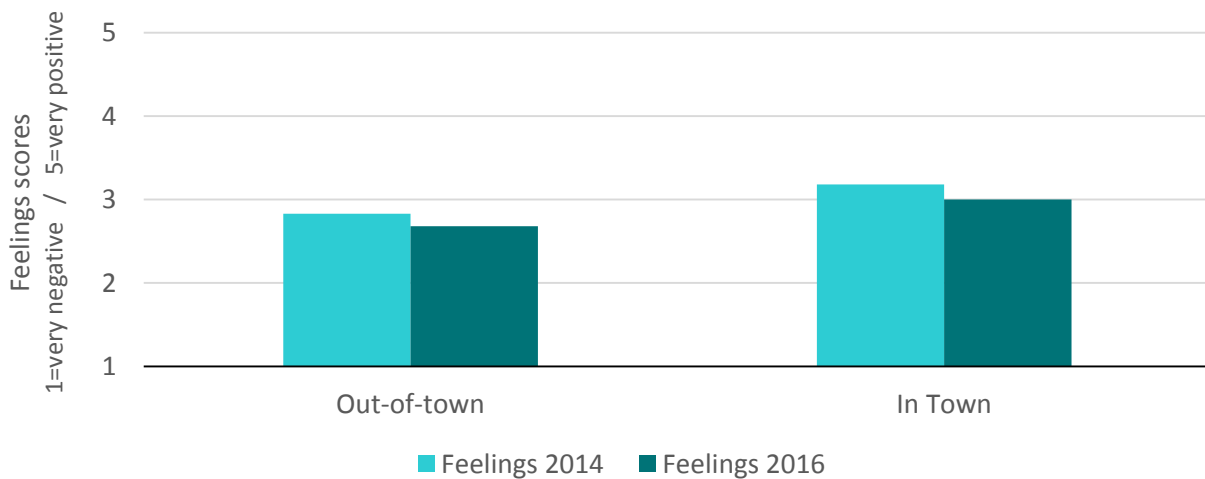
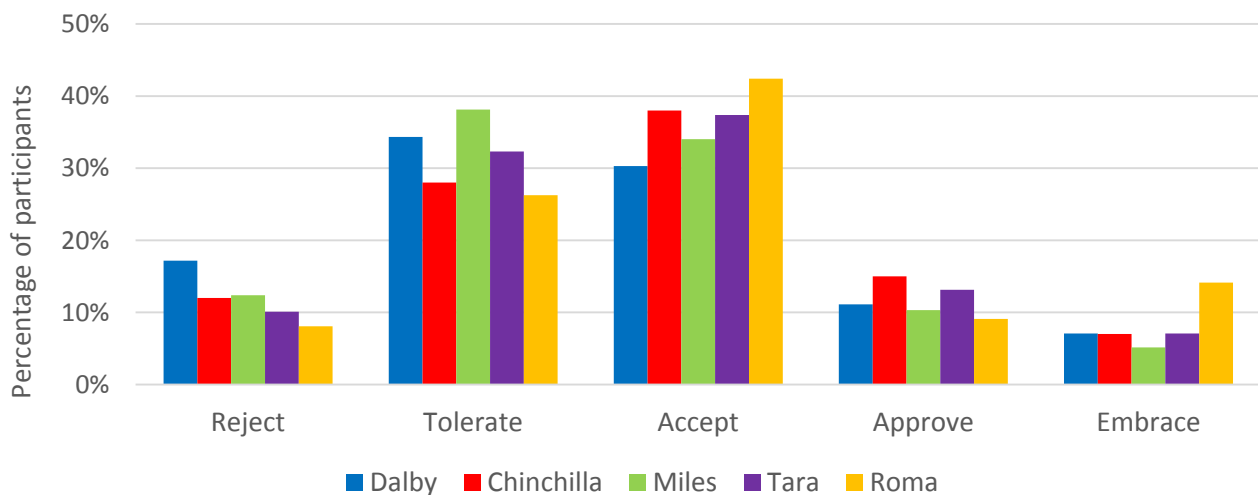


Figure 10 Attitudes towards CSG development 2016: Differences between subregions



Key messages

Triangulating our evidence

To better understand the implications of our research in the Western Downs, the two CSIRO Wellbeing and Responding to Change surveys were interpreted in light of other CSG studies and feedback from community, industry, and government stakeholders about our research.

We have identified key messages and suggestions which build on the main factors contributing to community wellbeing and adapting in the context of CSG development. Ensuring that key aspects of wellbeing remain strong, as well as improving processes for responding to changes, will help address a range of impacts, create local economic opportunities, and enhance confidence and optimism about the future in communities experiencing CSG development.



1. FOCUS RESOURCES ON UNDERLYING DRIVERS OF WELLBEING TO STRENGTHEN AND MAINTAIN COMMUNITY WELLBEING

Identifying the main drivers of community wellbeing provide opportunities to focus scarce community resources, state government activities, and social investments by companies towards activities that augment and maintain community wellbeing. Such opportunities include:

- ❖ Ensuring **services and facilities** are maintained and developed, and that gaps in key areas are addressed. Services and facilities include schools, health services, child care, shopping, sports, leisure, and cultural facilities
- ❖ Ensuring people feel **safe within their communities** and that newcomers are welcomed and integrated into the social fabric of the area. Provide opportunities for cohesive **social interaction** and building **community spirit**
- ❖ Supporting activities that further regional development by extending **job and businesses opportunities** in the region

2. DIRECT STRATEGIES AND ACTIVITIES TO THOSE AREAS THAT CONTRIBUTE TO HIGH COMMUNITY FUNCTIONING AND ADAPTATION

Developing adaptive actions within a community indicates to that community that it is functioning effectively (e.g., listening to the input of its residents and proactively planning for the future). This helps a community feel it can cope and respond to change in a way that enhances optimism about its future.

Many of these actions are processes for how community, government, and industry stakeholders can interact and work together to respond strategically to CSG activities. This means directing underlying resources and capabilities toward the following areas identified in the research findings as important for adaptive actions:

- ❖ Supporting processes for ensuring citizens **feel listened to and heard**
- ❖ Developing networks and systems for **sharing information** and learnings
- ❖ Addressing underlying factors important for **building trust** such as perceived industry competence, quality of relationships, and processes that are fair and reasonable
- ❖ Demonstrating **effective planning** and **leadership** across community groups and institutions interested in addressing issues and developing opportunities associated with CSG development

3. RECOGNISE AND RESPECT THE DIFFERENCES IN HOW RESIDENTS VIEW AND EXPERIENCE GAS DEVELOPMENT

Community adaptation to and acceptance of the CSG sector varies within communities and there will be residents with positive and negative views. The challenges and opportunities associated with CSG development will also vary for different segments of the community. Understanding and respecting these differences and tailoring initiatives will help to maintain community cohesion and mitigate unintended outcomes.

- ❖ Respecting different views also means respecting that many residents may have a moderate view, or may not have a firm view, about CSG development
- ❖ Engaging in discussion about CSG development with mutual respect without resorting to denigration of alternative views or personally denigrating others with alternative views
- ❖ Respecting different views also means respecting others who do not wish to engage in discussions about CSG development

4. CONTINUE IMPROVING LANDHOLDER RELATIONSHIPS WITH GAS

The results show that farmer attitudes and feelings toward CSG remain negative on average. Farmer relationships are key to a socially sustainable relationship with the community. Ongoing mistakes, whether major or minor, undermine farmers' perceptions of CSG company competence. This reduces trust and damages the reputation of the company more broadly. For the farmer, time spent addressing issues adds to the burden of co-existing with CSG.

- ❖ Build the capability of on-farm gas workers to perform their activities in a way that supports optimal farmer and CSG company relationships
- ❖ Consider developing industry standards to ensure high standards of on-farm behaviour and activities so that the relational aspects of conduct and compensation agreements (CCAs) are upheld
- ❖ Minimise turnover of local company contacts and employ those with an understanding of local and rural issues whenever possible

5. MITIGATE THE IMPACTS OF FUTURE UPS AND DOWNS OF THE INDUSTRY IN LOCAL TOWNS

Whereas farmers deal with CSG companies in an on-going way, towns' people experience peaks and troughs of activity depending on the phase of CSG development and how operational plans unfold. The extent of CSG related activity can fluctuate quickly, especially between a construction phase and ongoing operations. The industry is one of peaks and troughs over the next two decades, and preparing local businesses and towns for such trajectories will help them to be proactive and adaptive.

- ❖ Support local businesses to build resilience into their business particularly through understanding:
 - the nature and risks of the industry
 - where SMEs fit in the complexity of the supply chain
 - the importance of maintaining core customers
 - the need for their businesses to be diversified
 - the importance of seeking reliable information
 - the advantages of staying connected to business and industry networks
 - the benefits of accessing external business advice
- ❖ Encourage the CSG industry to support local businesses by:
 - maximising local content opportunities for the on-going operations phase as much as possible
 - signalling future industry changes as early as possible and actively correcting any misinformation

6. AVOID OVER-INVESTMENT IN HOUSING

Housing built in the construction phase to meet additional demand translated into an oversupply of housing in the operations phase. There were reports of excess low cost housing being taken up by new residents moving to the Western Downs region in the post-construction phase of the industry. Such changes can potentially affect the demand on local services and community cohesion if not managed proactively. Although the survey results indicated measures of community cohesion were still robust in 2016 there had been a significant drop across the region compared to 2014.

- ❖ In the construction phase, consider referencing mobile housing options over constructing new permanent homes for temporary housing demand, which would minimise an over-supply of housing in the early operations phase

- ❖ In the early operations phase, inform local communities of future changes to their town associated with rapid occupation of excess housing stock to allay concerns and support effective community responses for resourcing services and facilities

7. WATER IS STILL THE MAIN ISSUE

Uncertainty about water in terms of groundwater contamination and depletion are still a primary concern, particularly for farmers. Management of the environment for the future is a key driver of acceptance to gas and an indicator to the community that the region is adapting well to CSG development.

- ❖ Continue to involve farmers in monitoring their water bores
- ❖ Make the outcomes of make-good arrangements for water known
- ❖ Address the science around the decommissioning process

8. SHARE INFORMATION TO IMPROVE ADAPTIVE STRATEGIES

In 2016, approximately three in 30 residents expected their future community wellbeing to decline over the next three years. Uncertainty undermines relationships and contributes to concerns about the environment, local economies, health, and overall community wellbeing. Information sharing is still needed in the post-construction or operations phase to reduce uncertainty and improve adaptive strategies.

- ❖ Establish networks for sharing information among community stakeholders about the CSG industry and relevant research findings so that land owners and community know 'what's happening' and have a shared understanding of the science
- ❖ Help the community and other stakeholders 'make sense' of information so they have a clear understanding of what any future changes may mean for them
- ❖ Provide user-friendly summaries of the latest science on topics of importance to communities to help dispel myths and inaccuracies that arise to fill knowledge gaps

Sources

FACTSHEETS, COMMUNIQUEs AND ANIMATION

Community attitudes towards CSG development: 2014 and 2016 (Factsheet)

<https://gisera.org.au/project/community-functioning-and-wellbeing-2/>

Community Wellbeing in the Western Downs: 2014 and 2016 (Factsheet)

<https://gisera.org.au/project/community-functioning-and-wellbeing-2/>

Looking to the future: Job forecasts for the Surat Basin, 2014 to 2034 (Communique and Animation)

<https://gisera.org.au/project/economic-assessment-and-forecasting/>

REPORTS

Fleming D, Measham T, Graham P and Cai Y (2016) Employment scenarios in Queensland CSG Regions 2014–2034: a report to the Gas Industry Social and Environmental Research Alliance (GISERA). July 2016. CSIRO, Canberra. <https://gisera.org.au/project/economic-assessment-and-forecasting/>

Walton, A., McCrea, R., and Leonard, R. (2016) The 2016 CSIRO Community wellbeing and responding to change survey: Western Downs region, Queensland - Changes between 2014 and 2016 in the Context of Coal Seam Gas Development. CSIRO report. CSIRO Australia. <https://gisera.org.au/project/community-functioning-and-wellbeing-2/>

Walton, A., McCrea, R., & Leonard, R. (2014) *CSIRO survey of community wellbeing and responding to change: Western Downs region in Queensland*. CSIRO Technical report: CSIRO, Australia.

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ABOUT GISERA

The Gas Industry Social and Environmental Research Alliance (GISERA) is a collaborative vehicle established to undertake publicly-reported independent research. The purpose of GISERA is to provide quality assured scientific research and information to industry, government and communities, focusing on social and environmental topics including: groundwater and surface water, biodiversity, land management, the marine environment, and socio-economic impacts. The governance structure for GISERA is designed to provide for and protect research independence and transparency of research. Visit gisera.org.au for more information about GISERA's governance structure, projects and research findings.

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