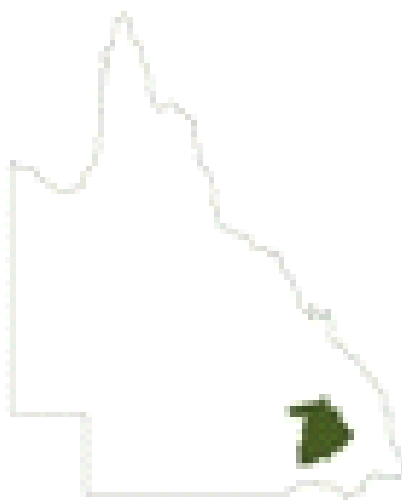


The 2016 CSIRO Community Wellbeing and Responding to Change survey: Western Downs region, Queensland

Changes between 2014 and 2016 in the Context of Coal Seam Gas Development

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Executive summary

The 2016 CSIRO Community Wellbeing and Responding to Change survey measures perceptions of wellbeing, resilience, adaptation to change, and expected future wellbeing within five communities affected by CSG development in the Surat Basin. This report documents how these aspects have changed over a two year period, during which time the region has experienced considerable change in the activity of the CSG industry.

From the increased economic activity of 2014, when the CSG industry was in a major building and construction phase to the relative slowdown of 2016, when the CSG industry was beginning its operations phase, we report the changes. We also document the changing attitudes and feelings towards CSG activities over that time.

What we did

We conducted a telephone survey that took approximately 30 minutes to complete. We asked 500 people 129 questions about their views towards quality of life in their community, how they felt their community was adapting and responding to changes, and what their expectations were for their community's future. We also asked them about their attitudes and feelings towards CSG development in their area.

When

We conducted the survey in February 2014 and again in February 2016. In February 2014, the Western Downs area was experiencing increased activity in the local economy from CSG construction and the drought had just broken. In February 2016, the construction phase had finished and the industry was transitioning into its operations phase; much of the area was in drought.

Where

We contacted people who lived in the Western Downs region of Southern Queensland to participate. For comparison in 2016, we also included people from the eastern Maranoa region, an area adjacent to the Western Downs which has had CSG wells since the mid-1990s. The eastern Maranoa region includes the main town of Roma as well as the areas of Injune and Surat. This comparison area is referred to as 'Roma'.

Who

All participants were randomly selected using public lists of landline and mobile phone numbers. Our response rate was 44.8%, which is high for a survey of this type.

The people who completed the survey were a representative sample of the region based on the ABS statistics for age, gender, and working status. We made sure our sample included:

- 100 people each from the areas of Dalby, Chinchilla, Tara, Miles, and Roma
- Half the people lived 'In Town' and half the people lived 'Out of Town'

Community wellbeing

The 2016 CSIRO Community Wellbeing and Responding to Change survey shows the biggest change in wellbeing from 2014 was the decrease in satisfaction in relation to jobs and employment opportunities, and the biggest improvements were in roads and the quality of the environment (e.g., dust and noise).

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.

Fifteen dimensions of community wellbeing assessed by residents

The survey measured 15 dimensions of community wellbeing across a wide range of topics, such as perceptions of community spirit, environmental quality, level of services and facilities, and employment and job opportunities.

In 2016, ten dimensions of community wellbeing were, on average, rated favourably. Five dimensions rated unfavourably including roads, community trust, environmental management for the future, decision making and citizen voice, and employment and business opportunities. However, roads and environment management both improved significantly between 2014 and 2016.

While some dimensions had improved and others declined, overall community wellbeing remained virtually the same between 2014, when CSG development was in its busy construction phase, and 2016 when the industry had slowed considerably though not yet in full operations phase.

Figure 1 shows the perceptions of each of these dimensions in 2014 and 2016. In Figure 1, dimensions that were rated unfavourably are near the centre of the graph (1 out of 5) and those that 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.

Dimensions that improved from 2014

Perceptions of environmental quality relating to dust and noise improved significantly since 2014 to become the second most highly rated dimension in 2016.

Perceptions of environmental management and roads also improved significantly since 2014, though on average residents were still not satisfied with these dimensions.

Dimensions that decreased from 2014

Satisfaction with employment and business opportunities declined significantly from being favourable in the construction phase in 2014 to being dissatisfied on average in the post-construction phase in 2016. This dimension was now the least favourable of the 15 community wellbeing dimensions, as shown in Figure 1.

There was also a small though significant decline in perceptions of community cohesion from its high level in 2014. This speaks to the power of the sample design to find small significant differences across time. Given this, it is interesting that none of the other dimensions of community wellbeing changed significantly from 2014.

Differences across the region

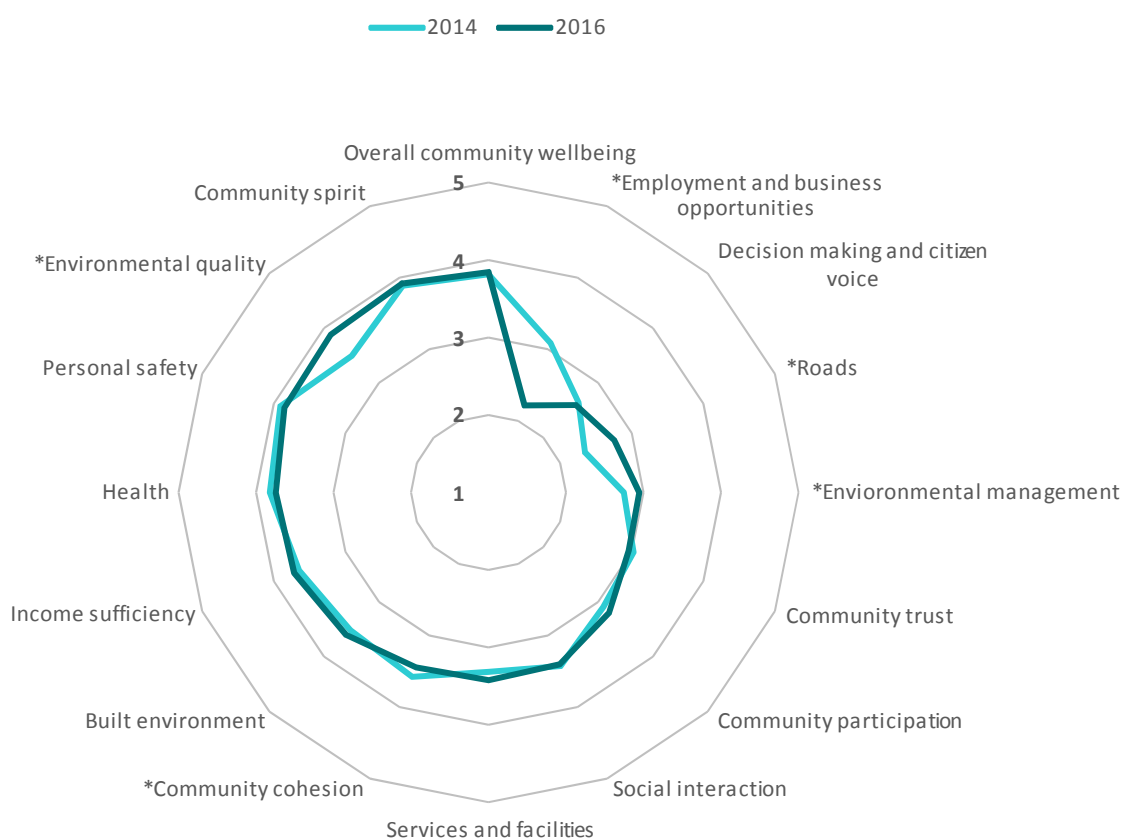
On average, across the region people who live in town reported higher levels of wellbeing than those who live out of town; although, this was particularly driven by the towns of Miles and Tara. People who lived out of town in Miles and Tara had lower ratings of community wellbeing than those living in 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.

Comparison with other areas

Community wellbeing compared favourably with other areas of rural Queensland. As another point of comparison, community wellbeing in the neighbouring area of Roma (in the eastern Maranoa region) was higher than any of the subregions of the Western Downs.

Figure 1 Community wellbeing dimensions: 2014 and 2016



Note: * denotes a significant difference between 2014 and 2016

What's most important for a sense of wellbeing within the community?

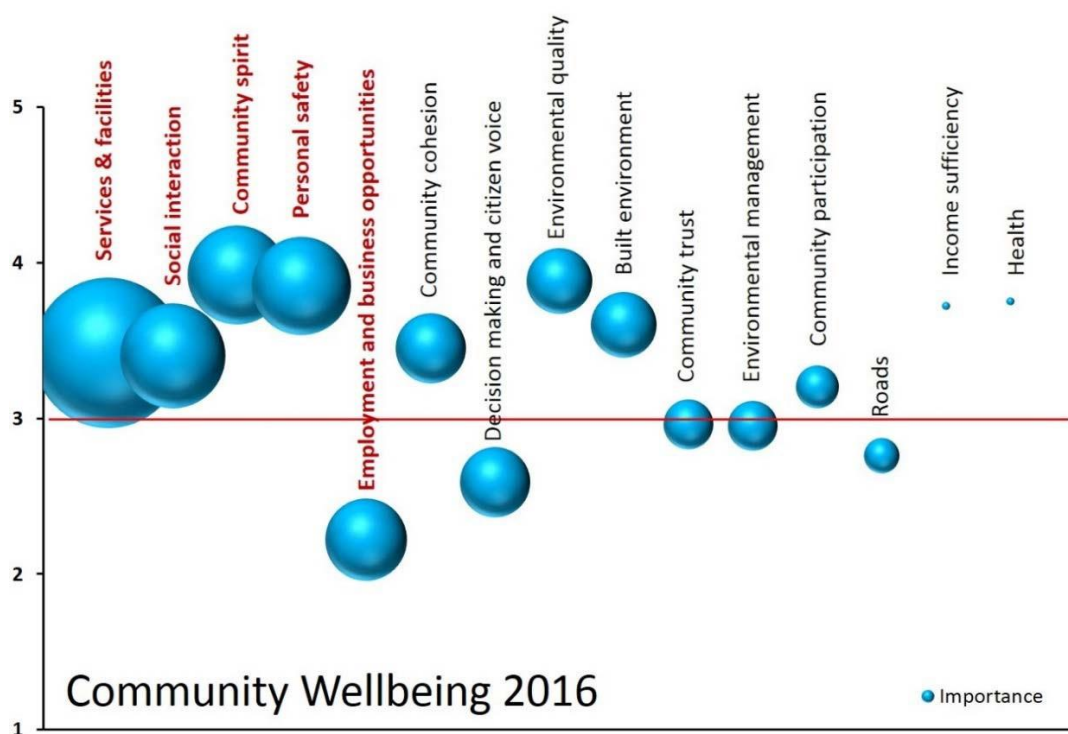
The survey showed the key contributors, or underlying drivers, to a sense of wellbeing in the Western Downs. When people felt these aspects of their community were strong then they viewed their community as a great place to live, a place that offers a good quality of life to all ages.

Underlying drivers of community wellbeing

1. The level of services and facilities,
2. The social aspects of community life, such as community spirit and social interactions,
3. Feelings of personal safety
4. Employment and business opportunities

Only the latter was seen as unsatisfactory, rated by respondents as less than three out of five (see Figure 2).

Figure 2 Community wellbeing dimensions 2016 ordered according to importance



Note: Red font denotes the most important, statistically significant predictors of community wellbeing; the size of the bubbles indicates the relative level of importance of that dimension to community wellbeing; the height of the bubbles indicates level of satisfaction with dimension

KEY POINTS: Community Wellbeing

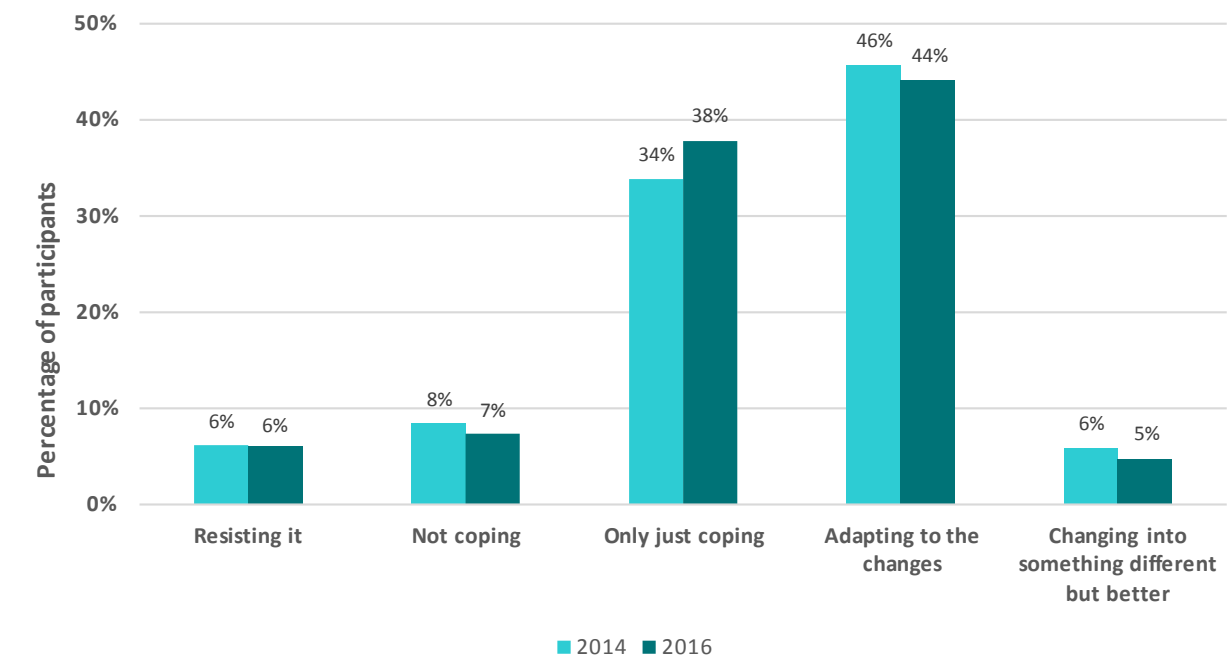
- The biggest change in wellbeing in 2016 was the decrease in satisfaction in relation to jobs and employment opportunities
- The biggest improvements were in roads and the quality of the environment (e.g., dust and noise), though residents were still dissatisfied with roads in the region
- Overall community wellbeing in the Western Downs region was favourable and remained relatively unchanged when measured in 2014 and 2016
- 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 largely driven by differences around Miles and Tara

Community resilience and adapting

Adapting to change was evident at the regional level but less so in the smaller community of Miles

In relation to how residents perceive their community is dealing with the CSG activities, the most common perception across the Western Downs region was that their community was adapting (44% of participants). However, there was also a considerable percentage of residents who thought their community was only just coping (38%), see Figure 3. These views remained about the same as in 2014.

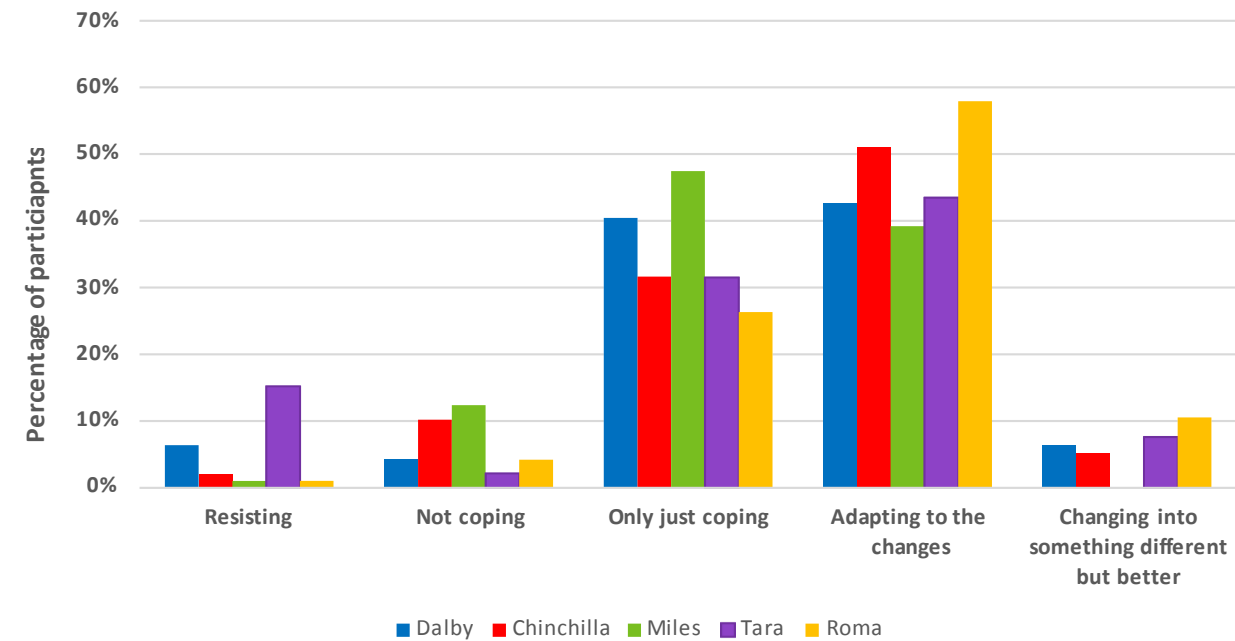
Figure 3 Community perceptions of adapting to CSG development: 2014 and 2016



Note: Differences between 2014 and 2016 were not significantly different

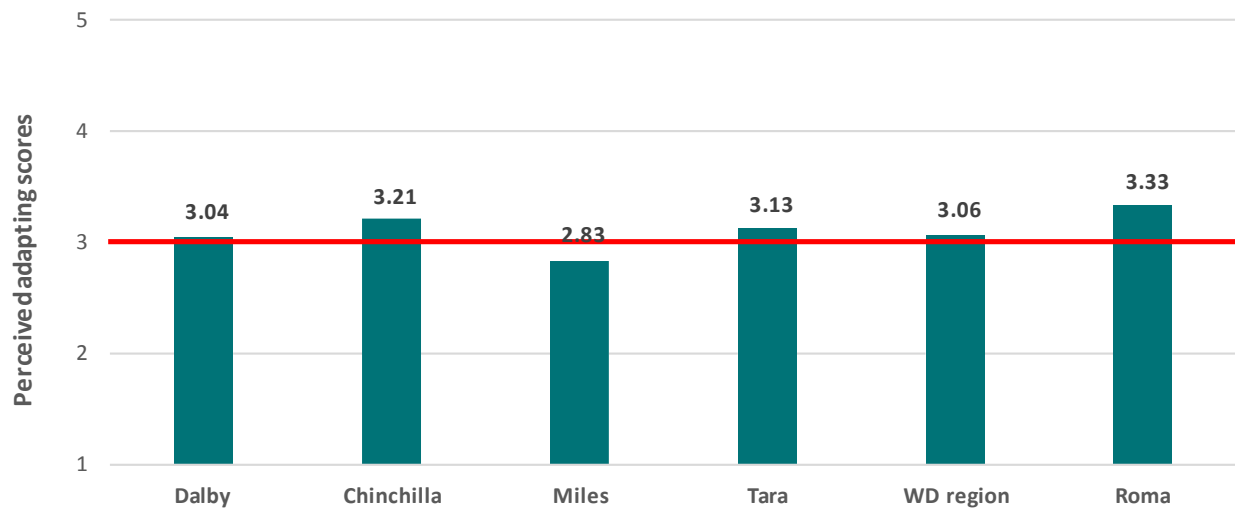
However, there were pockets across the region where residents indicated considerable proportions of ‘resisting’ and ‘only just coping’. As shown in Figure 4, when Western Downs is compared to the town of Roma, where CSG development has occurred for approximately two decades, there were higher proportions of residents in Roma who felt their community was adapting to the changes.

Figure 4 Perceptions of community adaptation to CSG development in 2016: Differences among the subregions



This perception was confirmed when residents were asked how well they felt their community was adapting to CSG activities. The smaller community of Miles reported that they were not adapting well on average ($M = 2.83$ out of 5). In comparison, Roma indicated significantly higher levels of adapting to CSG development than Miles and to the Western Downs region as a whole. See Figure 5.

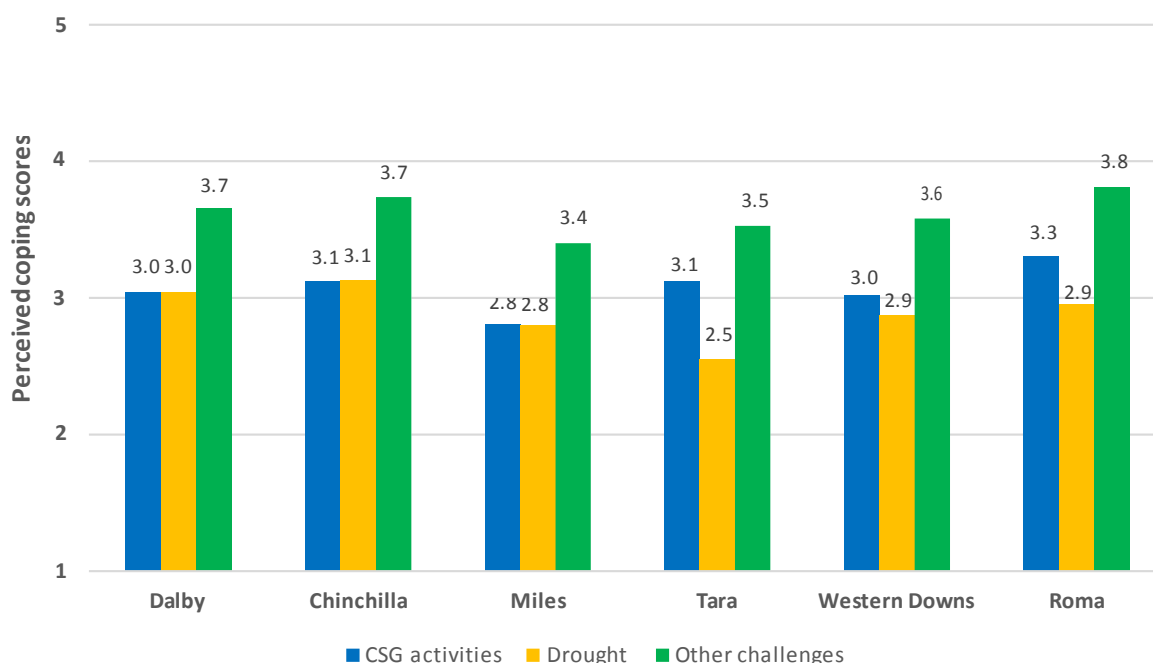
Figure 5 Perceptions of how well the local community was adapting to CSG activities: 2016



Coping with CSG, drought and other challenges

Across the region people felt their communities were not coping well with drought, and for some communities this combined with feeling that their communities were not coping well with CSG activities. In particular, Miles was coping with CSG significantly less well than Roma, which is in the adjacent Maranoa region. As shown in Figure 6, these sorts of pressures were considered more difficult to cope with than when they faced other challenges.

Figure 6 Perceptions of community coping with CSG activities, drought, faced with challenges: Differences among subregions 2016



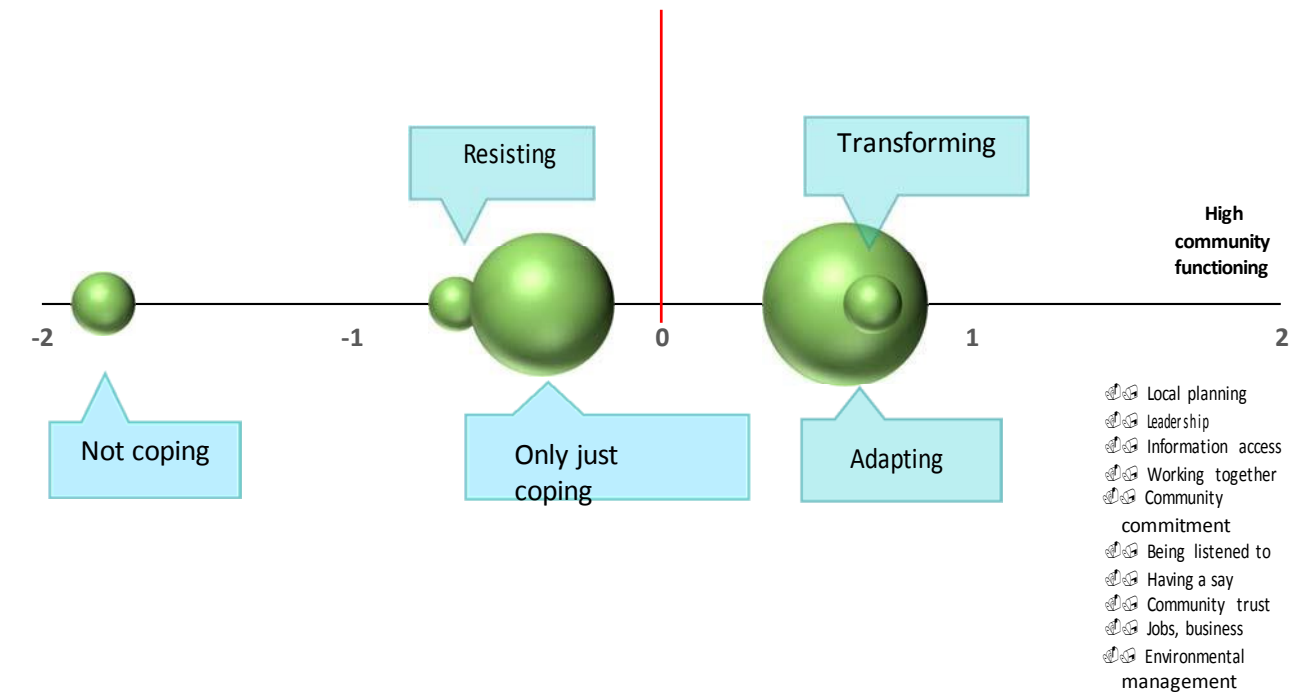
Indicators that a community is adapting well

When people felt that there are high levels of community functioning then they perceived their community as adapting and coping well with CSG (see Figure 7); they were also more accepting of CSG development.

High community functioning

- 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

Figure 7 Perceptions of community adaptation mapped to perceived levels of community functioning, 2016



Note: green bubbles represent five different perceptions of community adaptation; size of bubbles reflect the relative number of respondents who hold that view

Community Acceptance: Attitudes and feelings towards CSG

The 2016 CSIRO Community Wellbeing and Responding to Change Survey has shown that community attitudes vary across a wide spectrum but most people have moderate or 'luke-warm' views towards CSG development. The 2016 survey showed that on average there is a tendency towards more negative views than in 2014.

A range of community views

The CSIRO survey found that there was no single community view towards CSG development; rather there was a spread of attitudes that ranged from 'reject' CSG to 'embrace' CSG.

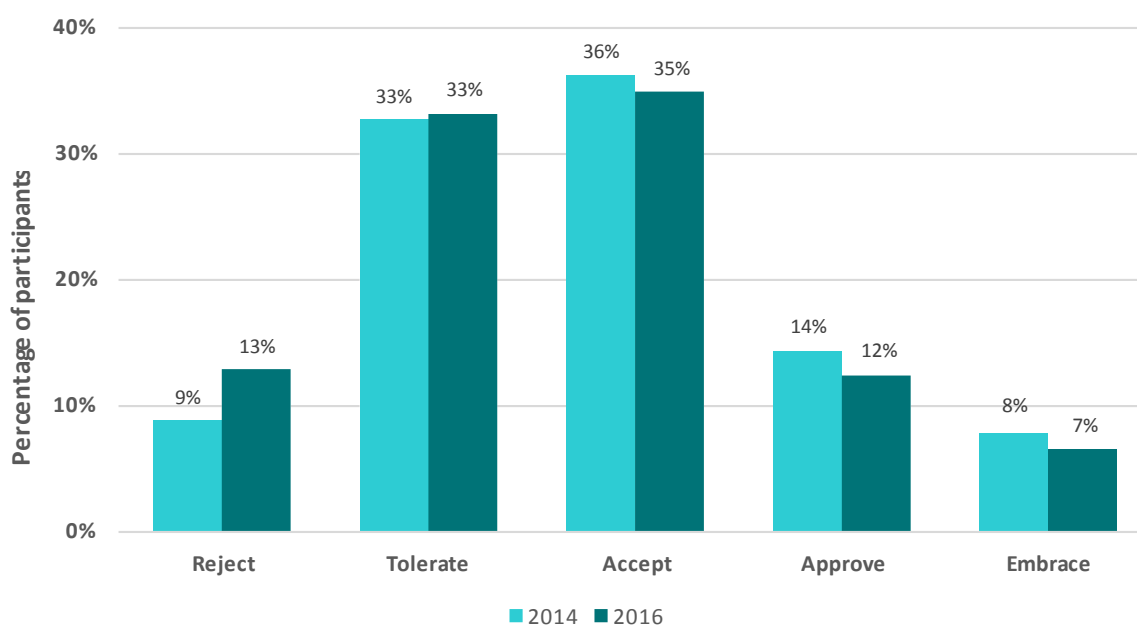
The survey showed that in 2016, most people had moderate or lukewarm views towards CSG - 33% of people 'tolerated' gas, 35% accepted gas, and 12% approved of gas, as shown in Figure 8. There were 13% who rejected gas and 7% who embraced gas. These attitudes tended to be slightly more negative in 2016 compared to 2014 ($p < .10$). However, on average, feelings about CSG development (such as angry, worried, pleased, and optimistic) were slightly negative overall in 2016 ($M = 2.83$), which was a significant change compared to 2014 ($M = 3.0$, $p < .05$).

These differences may be attributed to people's previous experiences and current situations, individual needs and wants, and personal world views and beliefs around gas development. These include perceptions of community functioning, environmental management, trust, and fairness.

CSG development covers extensive areas and affects many people, especially those residents who live out-of-town. In the case of the Surat Basin, thousands of wells have been drilled, impacting many different types of farms from broad acre cattle farming to more intensive agriculture. It also affects a range of town communities from smaller townships to larger regional centres. This amplifies differences in attitudes that CSG companies will potentially encounter as they intersect across the region.

For all stakeholders this requires an understanding that different perspectives exist within communities and between communities. The research findings suggest that companies engage with communities in an individualised and nuanced way, as it cannot be assumed that people's views are similar.

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



Note: There was a tendency for attitudes towards CSG development to shift to the left between 2014 and 2016 ($p < .10$)

What's the difference between 'tolerating' and 'accepting' CSG developments?

People who '**tolerated**' gas had negative feelings towards gas on average.

People who '**accepted**' gas had positive feelings towards gas on average.

What contributes most to more positive attitudes and feelings towards CSG?

People have a more positive attitude towards CSG development when they feel the following aspects of community life are strong.

- When they feel they are being **listened to** and **can have a say**
- **Trust** is high
- The **environment** is being managed well for the future
- There **are employment and business opportunities** for their community
- There is good **local planning** and **leadership**
- People are getting **access to information**

It also follows that when people felt those aspects of community life are low then they have more negative views towards CSG development.

KEY POINTS: Community acceptance of CSG activities

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

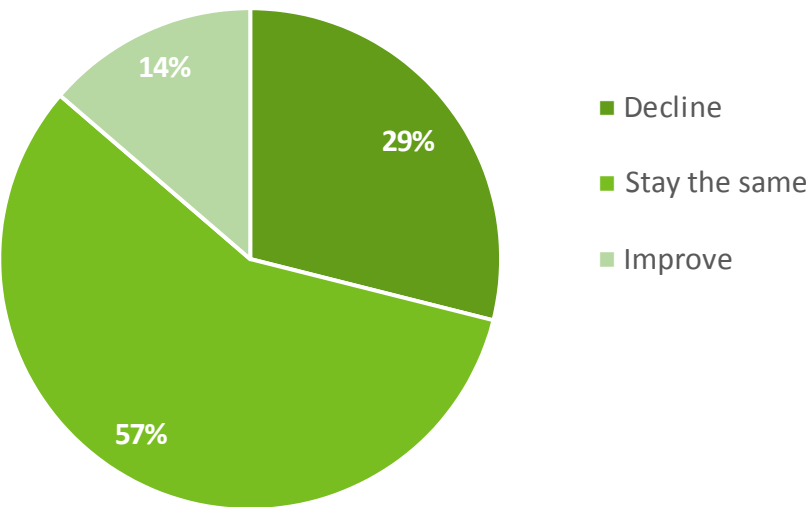
Expected future wellbeing

People’s optimism about the future of their community has not changed over the last two years. People show a pattern of being less positive about the future. Most people expect their community wellbeing to stay about the same, though more expect it to decline than to improve.

In 2014, residents in the Western Downs expected their overall community wellbeing to decline significantly in the following three years. However, overall community wellbeing in the Western Downs region remained virtually unchanged between 2014 and 2016. Thus, the slightly pessimistic outlook of expected future wellbeing in 2014 was not borne out in 2016.

Notwithstanding this, Western Down’s residents in general were still slightly pessimistic in 2016, expecting their overall community wellbeing to decline, showing a significant decrease from 3.84 to 3.69 on average over the next three years. As shown in Figure 9, only 14 % of people expect their community wellbeing to improve with most expecting it to stay the same.

Figure 9 Percentage of participants who expected future wellbeing to decline, stay the same or improve: 2016



Drivers of expected future community wellbeing

In 2016, community attitudes and feelings towards CSG development were no longer a driver of expected future wellbeing for the community. Rather a strong sense that the community was responding well to change, high levels of current community wellbeing, and a strong sense of place attachment were linked to higher expectations of community wellbeing into the future.

Drivers of expected future community wellbeing

- Community wellbeing
- Community resilience
- Place attachment

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1 Introduction

1.1 Background

In February 2014, around the peak of CSG construction activity in the Western Downs region of Queensland, a telephone survey on community wellbeing and responding to change was conducted across the Western Downs Regional Council area. The results identified key contributors to community wellbeing, community resilience and adaptation, and perceptions of future wellbeing. It also measured acceptance of CSG development within the community and the underlying drivers of that acceptance. The 2014 research provided a strong foundation for a study of changes in communities across different phases of CSG development. By establishing robust and comprehensive baseline data on community wellbeing, resilience, adaption, and acceptance, the CSIRO 2014 survey enables these aspects to be monitored over time. There was no community wellbeing survey prior to the commencement of the CSG industry to use as an earlier baseline.

Rapid change continued in the Western Downs after 2014 as the community moved into the post-construction phase of the CSG-LNG industry. The non-resident workforce on-shift in the Western Downs region declined substantially from 9,100 in June 2014 to 3,500 in June 2015 (Queensland Government Statistician's Office, 2015). This reflects the CSG industry transitioning from a peak construction to early operational phase in the Western Downs region. However, the non-resident workforce on shift was still significant compared to the estimated 33,935 resident population in the Western Downs in June 2015.

There is continuing conjecture about how community wellbeing is changing overtime in the Western Downs, and from a regional and broader national perspective, it is important to monitor community wellbeing and acceptance of CSG activities in the Western Downs to contribute to an informed wider public debate about CSG extraction. The main purpose of survey 2 is to monitor community wellbeing and functioning over time with representative samples of residents in the Western Downs using reliable and valid measures established in survey 1. More specifically, this survey aims to 1) measure community wellbeing and adaptive processes at a second point in the industry cycle; and 2) identify differences in perceptions between the end of the peak construction phase (Survey 1) to the early operations and maintenance phase (Survey 2) in the Western Downs region of Queensland.

The report proceeds with a brief overview of the four main topics measured in this report

1. Community wellbeing
2. Community resilience and adaptation
3. Community attitudes and feelings towards CSG activities
4. Expected future wellbeing

We then outline the methods that were used to collect and analyse the data and follow this with a presentation of our findings. The findings section combines the results with our discussion and interpretation of what we found. The findings are focussed on comparing results from 2016 and 2014, and looking for differences based on where people live within the region (subregions) and whether participants live in a town or not (Out-of-town and In-town). People who live out of town are largely farmers. We also analyse the data according to different socio-demographic differences such as age, gender, and income. In addition we use multiple regression and discriminant analysis to identify the underlying drivers of each of our topic areas and to model the most important factors that contribute to wellbeing, resilience, future wellbeing and acceptance of CSG within the community. Analysing the results for these types of differences and explanatory factors helps us to more accurately interpret the data and makes results more useful to end users of the report. Finally, we conclude the report with a summary of the most prominent findings and discuss next steps with this research.

1.2 Concepts

1.2.1 COMMUNITY WELLBEING

A measure of community wellbeing is a snapshot in time of the perceived 'quality of life' within the community; 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 or happiness within the community. Drawing from the literature and previous research in the WD region, we investigated wellbeing across 15 dimensions, which in turn can be grouped into six main areas: social, environmental, political, services and facilities, economic, and health (McCrea et al., 2014). Each of these areas was measured by collecting people's judgements and perceptions about the 15 different dimensions. Figure 10 depicts the dimensions grouped into the six areas (domains).

Figure 10 Dimensions of community wellbeing grouped into six domains



The fifteen different dimensions are measured by a range of questions, with each dimension comprising 3-5 items or questions. Each dimension of wellbeing acts like an umbrella that covers a theme of perceptions and ideas around an aspect of community wellbeing. Table 1 provides a brief description of each dimension. However, the actual items that are used to measure each dimension are included in the Methods section.

Table 1 Descriptions of the fifteen dimensions of community wellbeing

Dimension	Domain	Brief description
1. Personal safety	Social	Safety at home alone, walking outside, leaving the car by the roadside
2. Community spirit	Social	Friendliness, supporting each other, working together
3. Community cohesion	Social	Inclusion, welcoming of newcomers and people with differences
4. Community trust	Social	Trust within the community, towards government and CSG companies
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. Decision making and citizen voice	Political	Citizens having a say and being heard in decision making
10. Services and facilities	Services and Facilities	Schools, child care, sports and leisure facilities, food, shopping, medical and health services, and community support services
11. Built environment	Services and Facilities	General physical appearance of the town, cleanliness, parks, gardens
12. Roads	Services and Facilities	Condition, safety, and amount of traffic on the roads
13. Income sufficiency	Economic	Household income sufficient for household expenses, and lifestyles
14. Employment and business opportunities	Economic	Job opportunities in the community, local business doing well
15. Health	Health	Diet and eating habits, exercise habits, physical and mental health

1.2.2 COMMUNITY RESILIENCE AND ADAPTATION

The WD region has experienced significant and rapid change from the major economic development associated with CSG activities in the area. These changes have created both opportunities and challenges for the community from social, economic, and environmental perspectives (Measham & Fleming, 2014). Previous research identified different types of **community 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 belief that the community can work together to achieve change (**community efficacy**) is also important for dealing with change, (McCrea et al., 2014). Particular community actions may enhance community efficacy; however, trust within the community and a sense of community participation in decision making also play a part in communities working together to effectively deal with change (Walton et al., 2014; Williams & Walton, 2014).

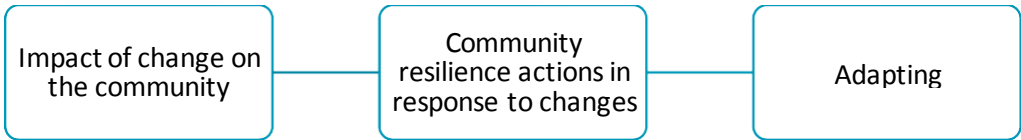
For this survey we have grouped these community resilience actions into three groups: 1) strategic actions, 2) community working together, and 3) community commitment. Each group of actions are depicted in Figure 11.

Figure 11 Three types of community actions important for resilience

Strategic actions	Working together	Community committment
<ul style="list-style-type: none"> •Planning, leadership, accessing and using information, learning 	<ul style="list-style-type: none"> •Sharing resources, infomation, and learnings; good working relationships, collective efficacy beliefs 	<ul style="list-style-type: none"> •Perseverance, supporting volunteers, getting involved, committed to the future

Finally, the literature suggests that responding to change can be viewed on a spectrum of types of adaptive responses (Brown & Westaway, 2011). These responses can range from resisting change, to coping, to adapting, to transforming. Resilient responses include outcomes beyond returning to the original state. Resilient responses suggest that communities adapt and potentially transform into something different but better (see Figure 12). Moreover, the research suggests that the way in which the community responds to the changes is linked to wellbeing within the community and a sense of wellbeing for the future..

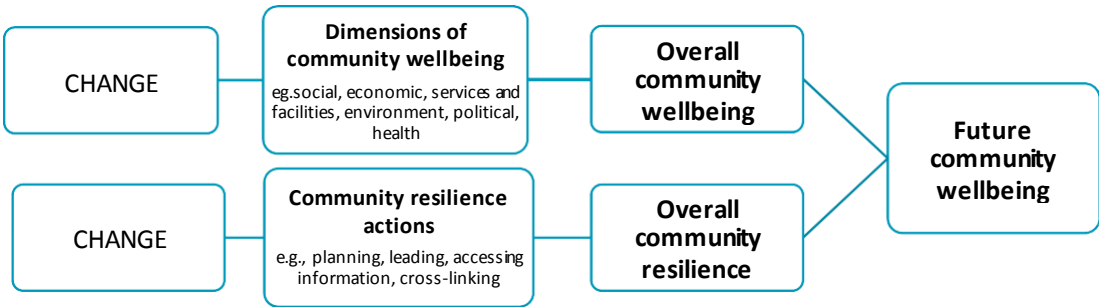
Figure 12 Responding to change



1.2.3 FUTURE COMMUNITY WELLBEING

In addition to measuring current perceptions of wellbeing, we also investigated expected community wellbeing in three years’ time, which we describe as ‘future’ wellbeing. As shown in Figure 13, our conceptual model suggests that a sense of future wellbeing relates not only to current levels of wellbeing but also to community resilient actions. Previous research suggests that if a community believes it is dealing effectively with change, despite its current levels of community wellbeing, then its level of expected wellbeing for the future will be higher (McCrea et al., 2015).

Figure 13 Explaining future community wellbeing



1.2.4 COMMUNITY ACCEPTANCE: ATTITUDES AND FEELINGS TOWARDS CSG DEVELOPMENT

Community support or acceptance of an industry's activities within a community is important to the ongoing operation of the activity. This acceptance is also referred to as a 'social Licence to operate' (SLO), whereby the industry meets the expectations of the community with regards to its actions and gains ongoing acceptance and approval (Gunningham, Kagan, & Thornton, 2004; Moffat & Zhang, 2014). Previous research conducted in a CSG region indicated that expectations revolve around aspects of community wellbeing such as affordable housing, good roads, job opportunities, sustainable businesses, water quality and quantity, maintenance of community spirit, community trust, and engaging with the community from a position of mutual respect (Williams & Walton, 2014). The importance of some of these factors to community acceptance of the CSG industry has been tested (Moffat & Zhang, 2014) and models of social licence to operate in other extractive industries have been established. However, we have also found that community acceptance of CSG relates to a sense of community wellbeing and perceptions of the way the community is responding to the changes; its resilience actions.

2 Method

2.1 Procedures

Like the survey in February 2014, this survey in February 2016 used computer assisted telephone interviewing (CATI) to survey 400 residents in the Western Downs region of southern Queensland. We used the same third party research company to conduct the survey to help ensure continuity of sampling and surveying procedures.

Using a database of landline and mobile telephone numbers, residents were randomly selected based on pre-determined selection criteria and quotas. Participants needed to be residents (rather than FIFO or DIDO shift workers) and aged 18 years or older. Sample quotas aimed for a representative sample in the Western Downs region on age, gender and employment according to the Australian Bureau of Statistics (ABS). We also used quotas to ensure there were 100 residents sampled in each of the subregions shown in Table 3 (Dalby, Chinchilla, Miles-Wandoan, and Tara). The 2016 survey also included a comparison subregion, with an additional 100 residents from the Eastern Maranoa near Roma. Quotas were also set for equal number of residents living in-town or out-of-town. The survey took 22 minutes to complete on average and a response rate of 44.8% was achieved for the 2016 survey, which is considered a very good outcome for telephone surveys.

The survey questions were the same as those in the 2014 survey with some additional items. The initial part of the CSIRO survey included some screening and demographic questions, plus a question asking participants which one of nine local communities they felt most part of. This community became the subsequent reference for all questions relating to 'community' throughout the survey. For example, if respondents identified Miles as their community then all proceeding questions were framed in relation to 'the town and surrounds of Miles'.

The second part of the survey included 84 questions about 15 different dimensions of community wellbeing, overall community wellbeing, and expected future wellbeing. The third part measured perceived community responses to change associated with CSG (community resilience and adaptation), while the fourth part measured community attitudes and feelings toward CSG. The final part included additional demographic questions. At the end of the survey participants were offered to be in a prize draw for \$50 gift vouchers as gratitude 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

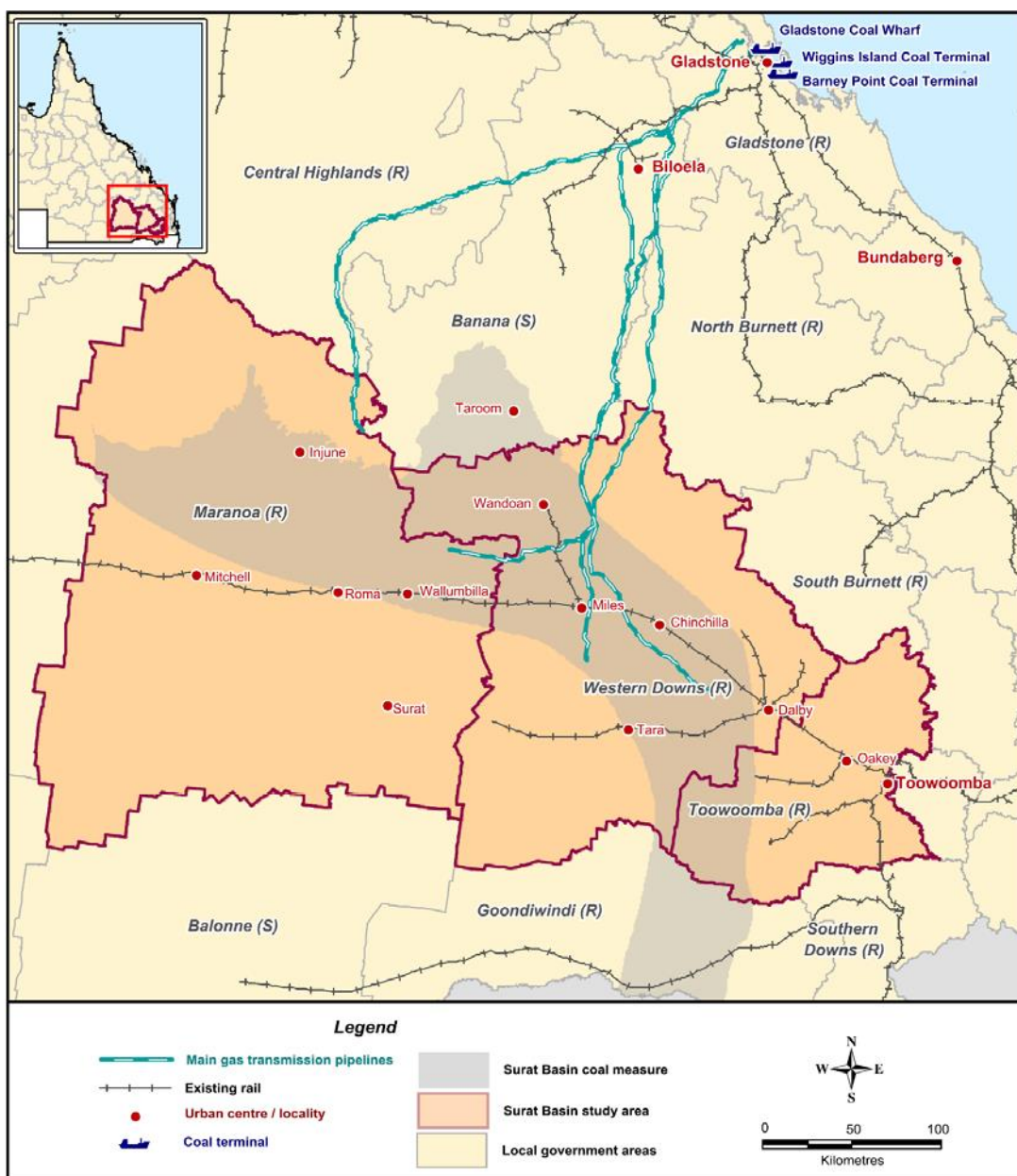


2.2 Sample

As in 2014, 400 residents in the Western Downs region were surveyed. As many as possible of these same residents (approximately 200) were surveyed again in 2016 with the remaining randomly sampled. This enhances the accuracy of measuring change between 2014 and 2016 in the Western Downs region, though this also contributed to the 2016 sample being a few years older than the 2016 sample.

In addition, another 100 residents were sampled from the eastern half of the Maranoa region - which includes Roma, Injune, Wallumbilla, and Surat and surrounding areas, but not as far west as Mitchell. These 100 residents are not included in statistics for the Western Downs region, nor in measuring changes between 2014 and 2016. However, they are included in tables of subregions as a point of comparison because this subregion is adjacent to the Western Downs and has had CSG production wells since the mid-1990s. We call this subregion Roma (see the eastern Maranoa region in Figure 15 and Table 3). The Toowoomba region east of the Western Downs was not included in this survey as it has relatively few CSG wells.

Figure 15 Map of three Local Government Areas in the Surat Basin: Western Downs, Maranoa, and Toowoomba



Source: (Queensland Government Statistician's Office, 2015, p.5)

Sample profile

Overall, as shown in Table 2, the 2016 sample was broadly representative of the population in the Western Downs region in terms of age, gender and employment status (Australian Bureau of Statistics, 2011). However, the 2016 sample was a little older and comprised more females than the 2014 sample. The median age in the 2016 sample (53 years) is four years older than that for 2014 (49 years), which was influenced by using 200 respondents from the 2014 survey who are now two years older.

Table 2 Profile of sample: percentage comparisons with ABS statistics

	2014 sample	2016 sample	ABS 2011 population census
Aged 18 - 34 years	24%	16%	27%
Aged 35 – 54 years	42%	42%	38%
Aged 55 plus	34%	43%	35%
Male	51%	47%	52%
Employed	65%	66%	65%

There were five subregions surveyed: four in the Western Downs (Dalby, Chinchilla, Miles and Tara) and one in the eastern Maranoa (Roma). Each subregion had a quota of 100 and Table 3 shows the specific postcodes, towns and surrounds that were surveyed in these subregions. The Roma subregion was included in the 2016 survey for comparison purposes. All statistics reported are for the Western Downs region except where the Roma subregion is specifically mentioned. Quotas were also set for in and out-of-town respondents resulting in 52.3% of respondents living in-town and 47.7% living out of town for the 2016 sample overall including the Roma subregion. The percentage of respondents who lived in town for each subregion were also consistent with 2011 ABS population census. See Table 3

Table 3 Postcodes and percentages of sample who live in town for each subregion

				% of sample who live in town		
Subregions	Postcodes	Towns and surrounds	Number of participants	2014 sample	2016 sample	2011 census
Dalby	4404, 4405, 4408	Dalby, Jandowae	100	71%	70%	72%
Chinchilla	4410, 4411, 4412, 4413	Chinchilla, Warra	100	65%	65%	55%
Miles	4415, 4416, 4419, 4424, 4425	Miles, Wandoan	100	39%	40%	31%
Tara	4406, 4421, 4422	Tara	100	21%	20%	20%
Roma	4417, 4428, 4454, 4455	Roma, Injune, Wallumbilla, Surat	100	NA	80%	73%

Response rate

The response rate for the 2016 survey was 44.8%, which is relatively high for random telephone surveys, and up from 25.6% in 2014. To check whether there was bias in those who agreed to participate in the survey or not we asked the interviewers to rate survey participants on their interest in the survey from 1 'very uninterested' to 5 'very interested'. We then compared this to a question about the respondent's attitude towards CSG activities, thus checking whether survey participation was associated with a acceptance or rejection of CSG activities in the region. We found there was no statistically significant association between participant interest in this survey and attitudes toward CSG activities in either 2014 or 2016 (both p 's > .05).

2.3 Measures

2.3.1 DEVELOPMENT OF THE MEASURES

Perceptions of community wellbeing, community resilience actions, expected future wellbeing, and personal attitudes and feelings towards CSG development were measured the same way in 2016 as they were in 2014 to facilitate comparisons.

The survey items were developed 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; Walton et al., 2013), with some items adapted for the CSG and rural context.

2.3.2 RESPONSE SCALES

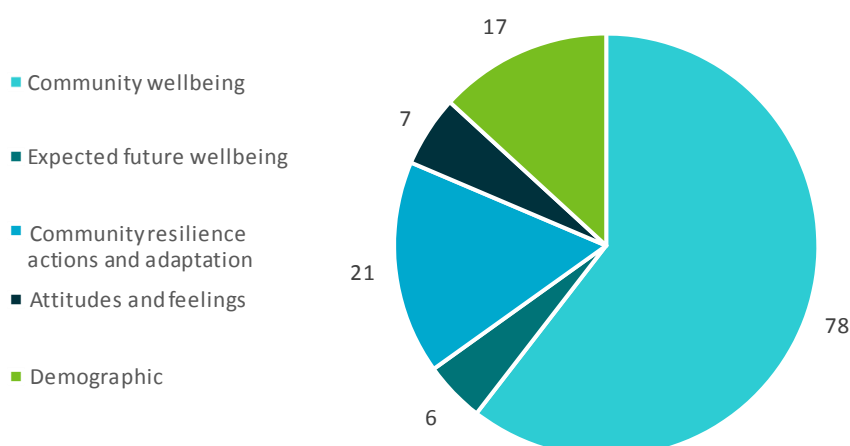
In most instances, respondents were asked to respond to questions using a scale from 1 to 5 where 1 was the least and 5 was the most. Participants were either asked to indicate how much they agreed with a statement, or how satisfied they were with the issue in question. The agreement scales ranged from 1 = strongly disagree to 5 = strongly agree, and the satisfaction scales ranged from 1 = very dissatisfied to 5 = very satisfied. In addition, there were three open ended questions that required short responses, and the demographic questions required participants to choose the most accurate category.

2.3.3 ITEMS USED TO MEASURE

Overall there were 129 items in the survey that measured

- community wellbeing (78 items)
- community resilience and adaptation (21 items)
- expected future community wellbeing (6 items)
- community acceptance: attitudes and feelings (7 items)
- demographic characteristics (17 items)

Figure 16 Number of items used in each section of the survey



A brief outline of the items that were used to measure each area is summarised below. Full descriptions of individual measures are detailed in Appendix A while the survey questions and exact wording of associated items are detailed in Appendix E.

Community wellbeing measures

Community wellbeing was measured in two ways:

- 1) The *fifteen dimensions* of wellbeing each with their own set of multiple items
- 2) *Overall wellbeing*, where participants were asked to rate their community as a suitable place to live for different segments of the population (children / teenagers / seniors). In addition, they were asked to provide an overall assessment of their community (as a place that offers a good quality of life / as a place they are happy to be living in)

Community Resilience and adaptation measures

Community resilience and adaptation was measured in four ways:

- 1) Community actions, which used eight items to measure perceptions of various community activities in response to changes from CSG development (planning, leadership, accessing information, sharing resources, perseverance, supporting volunteers, getting involved, working together)
- 2) Collective efficacy, which used two items to measure a belief in the community's ability to work together with CSG industry and government to deal with opportunities / challenges
- 3) An overall evaluation of the level of community adaptation in dealing with change from CSG development, (community was resisting / not coping / just coping / adapting / transforming into something better)
- 4) Community coping and adapting – three items that measured perceptions of the community's coping with different challenges (coping with CSG development / drought / facing other challenges) and one item that measured perceptions of the community's adapting to CSG development

Expected future wellbeing measures

Participants were asked to imagine what their local area would be like in three years' time and to rate their community (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), and to offer a reason to support their view in an open text question.

Community Acceptance Measures: Attitudes and Feelings towards CSG development

Attitude towards coal seam gas was measured using a single item measure asking participants if they reject, tolerate, accept, approve or embrace CSG development. Feelings towards coal seam gas was captured using 6 items – three items measured positive emotions (pleased, optimistic, excited) and three items measured negative emotions (sad, angry, worried).

Demographic questions

As in 2014, a range of demographic questions were asked including age, gender, location type (in or out-of-town), subregion, employment status, household income, connectedness to CSG (respondent or their family working for the industry), home ownership, and education. In addition questions specific to farmers were included such as how many wells were on their farm. The purpose of demographic questions is to profile the sample of participants and also to look for differences in results based on demographic characteristics

2.3.4 RELIABILITY OF MEASURES AND SCALE DEVELOPMENT

All multi-item measures were tested for 'internal consistency' or reliability using the Spearman-Brown Rho correlation for two-item measures and Cronbachs' alpha for measures with three or more items. Separate scales were developed for each dimension of community wellbeing, for overall community wellbeing, and for future wellbeing by averaging the score of the items within the respective scale. The reliability of all multi-item measures (scales) usually exceeded .80, with the lowest being .77 (reliability over .90 is considered very good, over .80 is considered good, and .70 can be considered adequate for scale development). See Appendix B for details of reliability for all multi-item measures.

There were two items that did not scale within their theoretical dimensions: one item related to the impact of rent or mortgage repayments on your household finances; and one item related to satisfaction with job-security (if applicable). Results for these items are reported in Section 7 as miscellaneous items.

2.4 Analyses

2.4.1 STATISTICAL TESTS

A range of bivariate and multivariate analyses were undertaken including t-tests, chi-square tests, analysis of variance, multiple regression, and discriminant analysis. To enhance readability of this report, these analyses are not explained in detail in the body of this report. However, more detailed results relating to some particular analyses are shown in Appendix C and referred to in the body of the report when relevant.

2.4.2 REPORTING RESULTS

Findings reported as 'significant' means that they were 'statistically significant'. 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 $p < .05$. If the probability that a finding occurring by chance were less than 10 percent for example, it would be denoted as $p < .10$. Where findings were of interest and had less than a 10 percent probability that the finding was due to chance, this was described as a 'tendency' associated with the finding. This is particularly useful where sample sizes are small, for example less than 50. Whether a tendency is considered important or not is a subjective judgement, depending on the reader.

In addition, most 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.

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FINDINGS

3 Community Wellbeing

The largest change from 2014 to 2016 in particular dimensions of community wellbeing was the decrease in satisfaction in employment and business opportunities from slightly positive in 2014 to negative in 2016. The largest improvements were satisfaction with roads (though still dissatisfied on average) and the quality of the environment (e.g., dust and noise), which was now very positive. These changes reflect differences between the construction phase in 2014 and the post construction phase in 2016. Even though some aspects of wellbeing decreased and some improved, *overall* community wellbeing in the Western Downs region in 2016 remained robust and similar to 2014.

3.1.1 OVERALL COMMUNITY WELLBEING

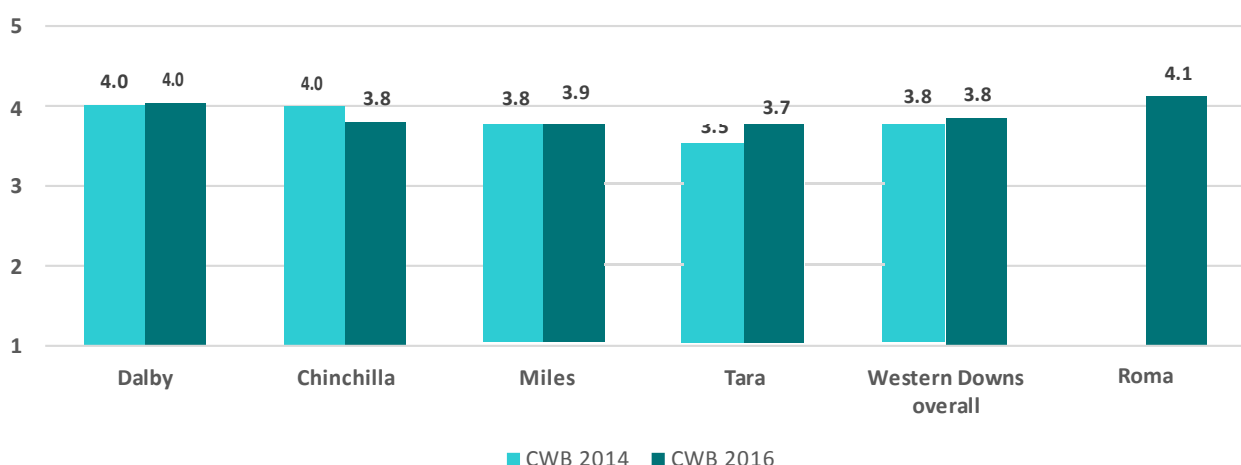
Overall community wellbeing in the Western Downs region remains virtually unchanged between 2014 and 2016 ($M = 3.82$ and $M = 3.84$, respectively) which corresponds to the construction and post-construction phases of the CSG industry. There was no community wellbeing survey prior to the commencement of the CSG industry with which to make earlier comparisons. As shown in Figure 17, in 2016 as in 2014, there were significant differences among the subregions. There were also significant changes in one of the four subregions over the 2-year time period. Differences persist between those who live out-of-town and those who live in-town in terms of how they view their community wellbeing.

Differences among subregions

Community wellbeing around Chinchilla declined significantly in 2016 when compared to 2014 ($M = 4.0$ and $M = 3.88$ respectively), while Dalby, Miles, and Tara remained about the same. As shown in Figure 17, community wellbeing was the lowest around Tara, which was significantly lower than all the other subregions in 2014, but only significantly lower than Dalby in 2016.

As a point of comparison, community wellbeing in the neighbouring subregion of Roma ($M = 4.12$) was higher than the Western Downs ($M = 3.84$), and significantly higher than both Chinchilla and Tara ($p < .05$).

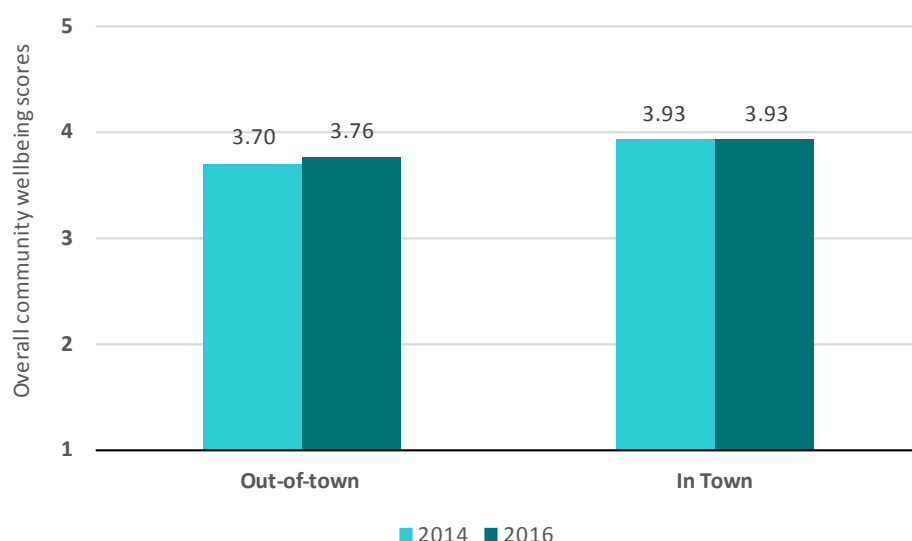
Figure 17 Overall community wellbeing for Western Downs, subregions, and Roma: 2014 and 2016



Differences between Out-of-town and In-town

In both 2014 and 2016 there is a pattern for people who live out of town to perceive community wellbeing as lower than those people who live in town. This difference is statistically significant but it is driven by differences in Miles and Tara. Whereas, perceptions of community wellbeing for out-of-towners in the other subregions of Chinchilla and Dalby are similar to those of in-towners. When comparing community wellbeing levels in 2014 with 2016 there has been no real change for either the out of town group or the in-town group. Both groups report moderately high levels of community wellbeing. See Figure 18.

Figure 18 Overall community wellbeing Out-of-town and In-town: 2014 and 2016



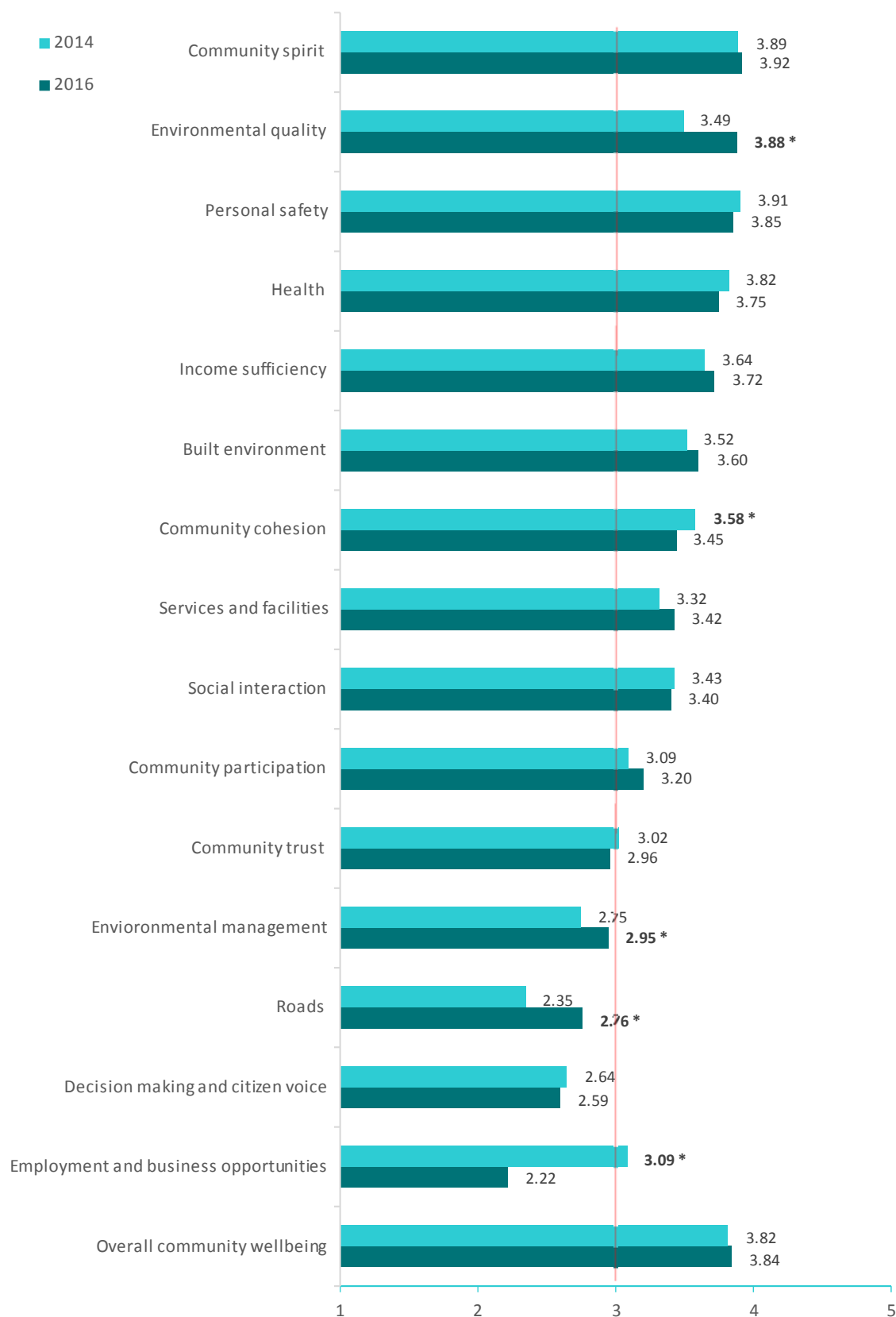
3.1.2 COMMUNITY WELLBEING DIMENSIONS

Most dimensions of community wellbeing in the Western Downs were rated favourably in 2016. Figure 19 shows the averages for each dimension between 2014 and 2016, ordered by how positively each was perceived in 2016. The scale is from 1 to 5, where 1 = lowest and 5 = highest, and a score of 3 indicates a neutral response, neither a negative nor positive perception on average.

While some dimensions improved and others declined, overall community wellbeing remained virtually the same between 2014 and 2016. Perceptions of environmental quality relating to dust, noise and air pollution improved significantly since 2014 to become the second most highly rated dimension in 2016. Perceptions of environmental management and roads also improved significantly since 2014, though residents were still not satisfied with these dimensions on average.

Satisfaction with employment and business opportunities declined significantly between the construction phase in 2014 and the operations phase in 2016 to such an extent that residents were now dissatisfied on average. Community cohesion also declined significantly. This related to residents seeing their local community as welcoming of others (e.g., newcomers and people of different cultures). However it only declined slightly and was still positive. Other dimensions of community wellbeing did not change significantly between 2014 and 2016, nor did overall community wellbeing.

Figure 19 Perceptions of community wellbeing dimensions: mean scores for 2014 and 2016



Note: Scores: 1 = lowest and 5 = highest; scores below 3 indicate dissatisfaction and scores above 3 indicate satisfaction. * indicates a significant difference between 2014 and 2016

Differences among subregions

Table 4 presents satisfaction levels for the fifteen different dimensions of community wellbeing across the different subregions. Dimensions with scores greater than three are viewed as favourable on average and dimensions with scores less than three are viewed unfavourably. Unlike 2014, satisfaction in Tara with services and facilities, social interaction, and community participation has shifted to being favourable. However, dissatisfaction with community trust, and employment and business opportunities has extended across the region to all subregions when compared with 2014.

Table 4 Dimensions of community wellbeing for subregions and the Western Downs region overall: 2016

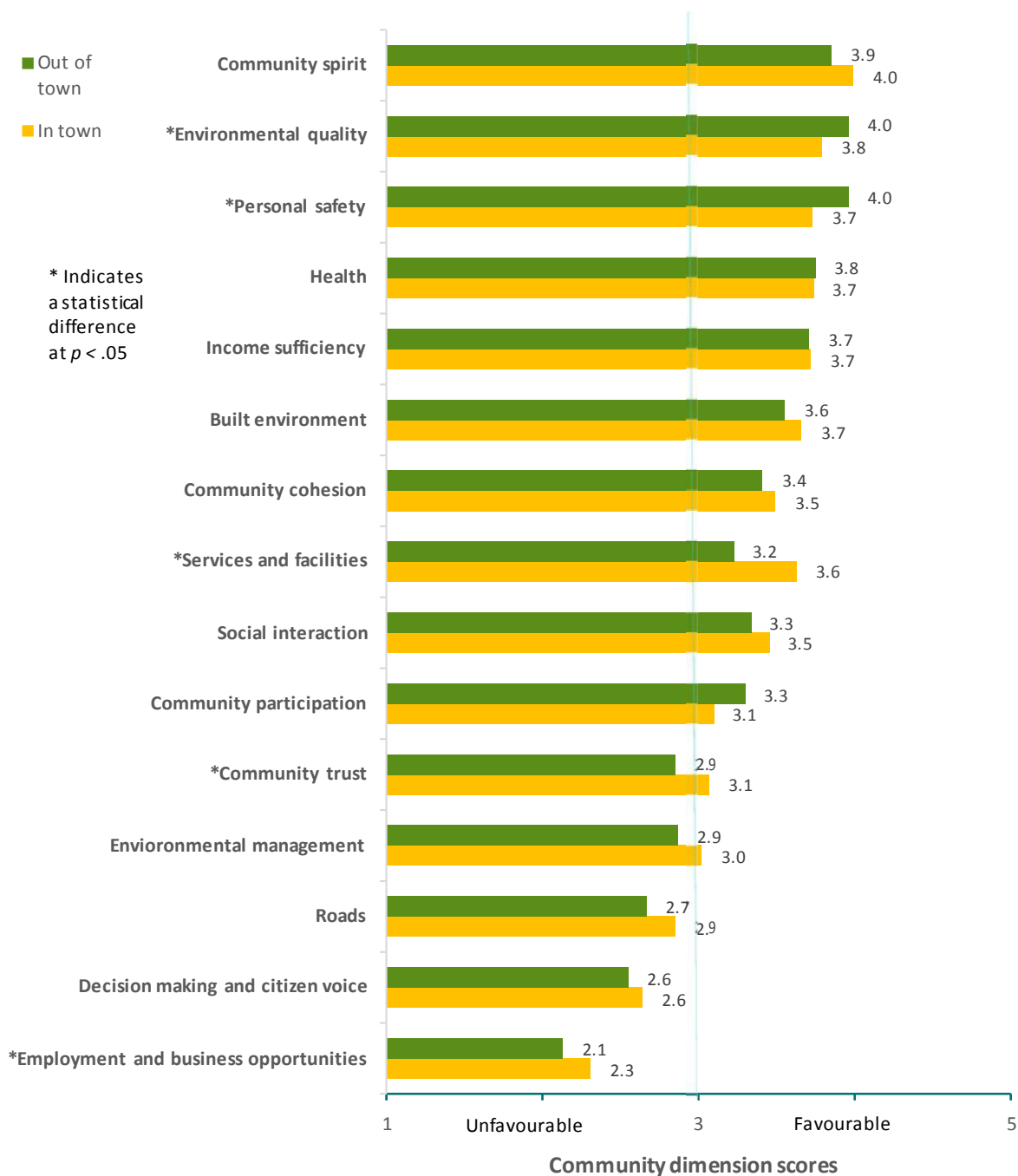
Dimensions of community wellbeing	Dalby	Chinchilla	Miles	Tara	WD region overall	Roma
Community spirit	3.93	3.93	3.94	3.87	3.92	4.20*
Environmental quality	3.82	3.78	3.91	4.01	3.88	4.28
Personal safety	3.70^L	3.51^L	4.23^H	3.97^H	3.85	4.02*
Health	3.78	3.70	3.84	3.67	3.75	3.85
Income sufficiency	3.68	3.70	3.72	3.77	3.72	3.87
Built environment	3.82^H	3.45^L	3.58	3.57	3.60	3.60
Community cohesion	3.26	3.52	3.56	3.45	3.45	3.91*
Services and facilities	3.72^{H,>}	3.55^H	3.37^{H,<}	3.06^L	3.42	3.65*
Social interaction	3.51	3.47	3.42	3.21	3.40	3.62*
Community participation	3.06	3.08	3.49	3.17	3.20	3.28
Community trust	2.92	3.00	2.98	2.94	2.96	3.29*
Environmental management	3.11	2.79	2.87	3.01	2.95	3.14
Roads	2.72	2.73	2.95	2.64	2.76	3.09*
Decision making and citizen voice	2.66	2.59	2.50	2.63	2.59	2.84*
Employment and business opportunities	2.39^H	2.28	2.04^L	2.15	2.22	2.66*
Overall community wellbeing	4.03^H	3.79	3.88	3.67^L	3.84	4.12*

Note: Scores: 1 = lowest and 5 = highest; shading indicates areas of dissatisfaction; bold font indicates significant differences in mean scores; L denotes a significantly lower score than H; H denotes a significantly higher score than L; < denotes a significantly lower score than >; * denotes significantly different from WD region

Differences between Out-of-town and In-town

People who live out of town perceive significantly higher levels of personal safety and quality of the environment in terms of dust and noise levels. However, they view services and facilities, levels of community trust, and employment and business opportunities less favourably than people who live in town. See Figure 20.

Figure 20 Community wellbeing dimensions 2016: Out-of-town and In-town



3.1.3 MOST IMPORTANT DIMENSIONS OF COMMUNITY WELLBEING

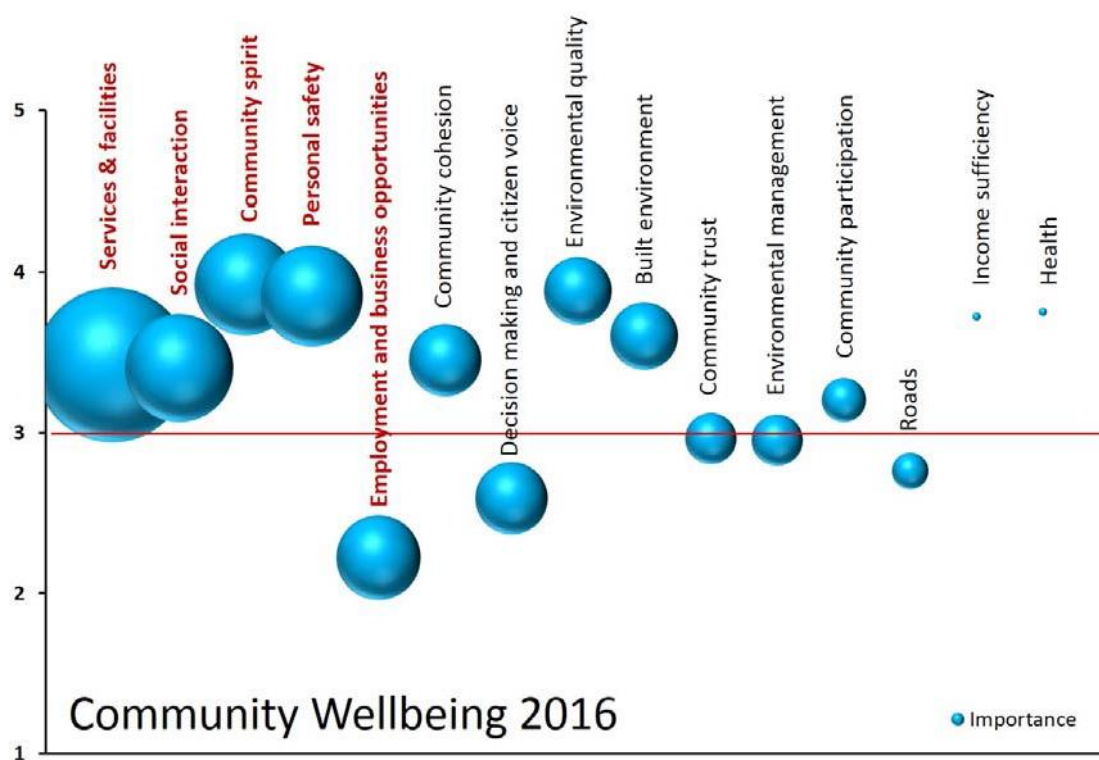
Understanding the drivers of wellbeing

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. Multivariate statistical analyses are one way to identify the drivers underpinning community wellbeing. See Appendix C for details of the statistical output.

In 2016, the underlying drivers of community wellbeing were the level of services and facilities, social interaction, community spirit, personal safety, and employment and business opportunities. The other dimensions were not significant predictors of wellbeing. This implies that when people view services and facilities as high, when they feel the social aspects of their community life are strong (social interaction, community spirit, and personal safety), and when they feel that there are good employment and business opportunities then they also feel that their community offers a great quality of life and is a great place to live.

However, interestingly not all of these variables were viewed positively in 2016, with employment and business opportunities seen as weak. Figure 21 combines the level of importance of a particular dimension (the size of the bubble) with the level of satisfaction in which it is viewed by participants (the height of the bubble). A dimension that is positioned below the red line denotes a dimension that people assessed as negative in 2016. The smaller the size of the bubble the less important the dimension is to a sense of community wellbeing. Notably, the dimensions that reflect personal situations such as health and income sufficiency are not drivers of community wellbeing. Moreover, we suspect these types of dimensions would be important predictors of individual or personal wellbeing rather than community wellbeing.

Figure 21 Community wellbeing dimensions 2016 ordered according to importance



Note: Red font denotes the most important, statistically significant predictors of community wellbeing; the size of the bubbles indicates the relative level of importance of that dimension to community wellbeing, the height of the bubbles indicates level of satisfaction with dimension

Comparing the drivers of community wellbeing in 2014 and 2016

The most important dimensions, or predictors, of community wellbeing remained similar in 2014 and 2016, and these are summarised in Table 5.

Table 5 Summary of underlying drivers of community wellbeing in the Western Downs region: 2014 and 2016

Predictors of community wellbeing 2014	Predictors of community wellbeing 2016
Services and facilities	Services and facilities
Community spirit	Social interactions
Community cohesion	Community spirit
Social interaction	Personal safety
Personal safety	Employment and business opportunities
Environmental quality	
Non-predictors: Built environment, community participation, community trust, income sufficiency, roads, health, decision making and citizen voice, environmental management, employment and business opportunities	Non-predictors: Community cohesion, decision making and citizen voice, built environment, environmental management, community trust, community participation, roads, income sufficiency, health

Services and facilities, social interaction, personal safety, and community spirit were significant in both years. This reaffirms the importance of services and facilities along with a range of social factors in contributing to overall community wellbeing in the Western Downs region.

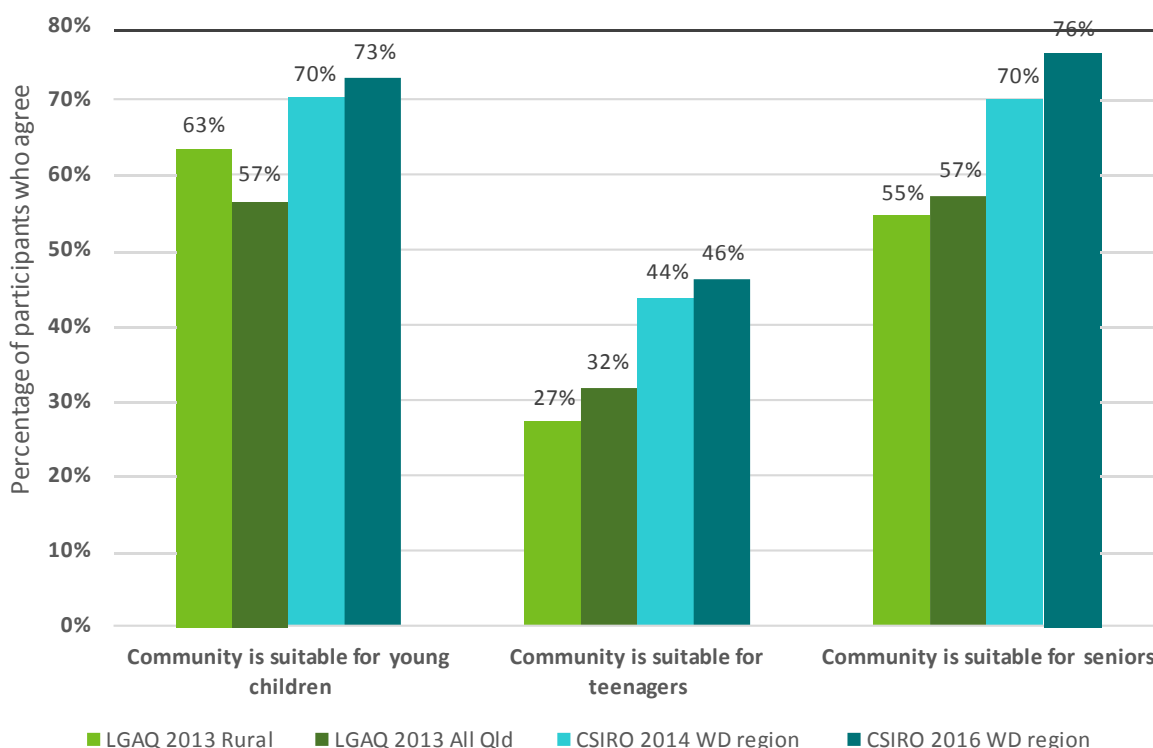
However, the social factor of community cohesion was no longer significant in 2016, suggesting that it is less important in the post-construction phase. Environmental quality was also not significant in 2016, potentially because of less dust and noise in the post-construction phase.

Interestingly, employment and business opportunities did not contribute significantly to overall community wellbeing in 2014 but emerged as a significant predictor in 2016. Employment and business opportunities may have become more important since the local economy has slowed in the post-construction phase. There was a modest level of satisfaction with local business employment opportunities in the construction phase of 2014 ($M=3.09$), however this dropped significantly in the post-construction phase as measured in 2016 ($M=2.22$). Given the decline in satisfaction with employment and business opportunities in the Western Downs and its significance for contributing to overall community wellbeing in the post-construction phase, attention should be given to planning business and employment opportunities across the construction and post-construction phases.

3.1.4 COMPARING THE WESTERN DOWNS WITH QUEENSLAND AND REGIONAL AUSTRALIA

The Local Government Association of Queensland (LGAQ) measured community wellbeing in Queensland in 2012 using three survey items (Morton & Edwards, 2013). Using the same three survey items, community wellbeing in the Western Downs can be compared to the rest of Queensland in 2013. Community wellbeing in the Western Downs in both 2014 and 2016 compared favourably to other rural areas in Queensland, South East Queensland (SEQ) and Queensland overall in 2013. See Figure 22. There was a significantly higher percentage of residents with favourable responses (4 or 5 out of 5) in the Western Downs in all three age categories, with the exception of young children in rural Queensland. While these measures of community wellbeing did not cover all age categories (e.g., middle aged adults) and the comparison years were not the same, it does suggest that community wellbeing in the Western Downs region was quite robust in 2014 and 2016. However, there was no significant improvement in these community wellbeing items between 2014 and 2016 in the Western Downs.

Figure 22 Comparing WD region with other areas of Queensland: Percentage of favourable responses for three wellbeing measures



Regional wellbeing survey

In another study by the University of Canberra, a broader measure of community wellbeing was used which they called the Community Wellbeing Index or CWI (Schirmer, Yabsley, Mylek, & Peel, 2016). The CWI included what we refer to in our survey as place attachment, community spirit, overall community wellbeing, overall community resilience and expected future wellbeing. They found the CWI tended to be less in the Western Downs region than other regions in rural and regional Queensland, and that both the Western Downs and rural and regional Queensland were significantly less than rural and regional Australia.

4 Community resilience: responding to change

4.1.1 COMMUNITY RESILIENCE ACTIONS

Participants were asked about a range of community actions in response to changes related to CSG development. They were asked about planning, leadership, and information, which are considered necessary components for responding strategically to change. In addition, they were asked about the community's ability to work together as a collective and to work together with outside stakeholders such as government and industry to address changes related to CSG development. We call this collective efficacy beliefs. Finally, participants were asked about the community's commitment to its future, and its preparedness to persist and to support its volunteers. The items are detailed in Table 6.

Results indicated that responding strategically, in terms of planning, leadership, and accessing information to effectively deal with change were viewed negatively. On the other hand, people's views that the community could work together, sharing resources and information, and that it was committed to the future of the local area were viewed far more positively. See Table 6.

Compared to 2014, perceptions of overall community resilience in the Western Downs region in 2016 remained about the same, and at modest levels ($M = 3.16$ and $M = 3.15$ respectively). Even though people's perceptions of community resilience was relatively unchanged, it is important to consider that in the intervening two years of the survey the region had experienced very different types of change events.

The survey in February 2014 was undertaken at the end of peak CSG-LNG construction activity, when the area had experienced considerable economic growth. In contrast, the survey in February 2016 was undertaken after the peak construction phase had finished, and there was a noticeable economic slowdown in the region. Thus communities were responding to different types of changes in relation to CSG development in 2014 and 2016.

Table 6 Community resilience actions: 2014 and 2016

Community actions	2014	2016
ACTING STRATEGICALLY		
There is good planning for the future for this town and surrounds	2.79	2.70
There is adequate leadership within the community to deal with the changes	2.82	2.83
The community can access relevant information to deal with change effectively	2.93	2.95
Overall, the community is responding strategically to CSG activities	NA	2.79
WORKING TOGETHER		
Good working relationships exist among different community groups	3.69	3.48
The community shares resources, information, and learnings	NA	3.35
There are key people in our community who know the right people to help get things done	3.20	3.44
Overall, the community is working together in responding to CSG activities	NA	3.12
Local residents, government, business and resource companies: All these groups can work together to address <i>problems</i> associated with CSG development	3.15	3.07
Local residents, government, business and resource companies: All these groups can work together to take advantage of the <i>opportunities</i> associated with CSG development	3.23	3.14
COMMUNITY COMMITMENT		
The community can persevere to find solutions for its problems	3.30	3.25
The community is able to support its volunteers over the long term	3.31	3.33
The community gets involved in responding to changes	NA	3.26
Overall, the community is committed to their local area's future	NA	3.70
Overall I am satisfied with the way the community is responding to the changes	3.21	3.37
Overall community resilience	3.16	3.15

Note: Overall community resilience based on common items between 2014 and 2016; bolded = significantly different

Differences among subregions

There were no significant differences in perceptions of overall community resilience among any of the subregions in the Western Downs in either 2014 or 2016. However, people in the Chinchilla subregion perceived their overall community resilience to be significantly less in 2016 than 2014. As a point of comparison, overall community resilience was 3.49 for Roma and surrounds in 2016, which was significantly higher than Chinchilla and Miles in the Western Downs region. See Figure 23.

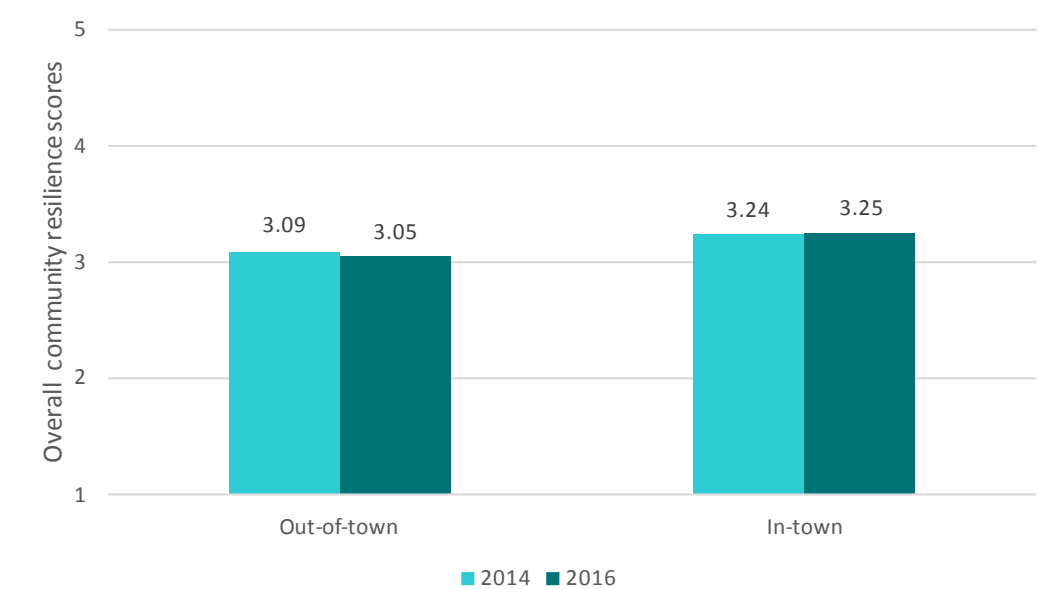
Figure 23 Perceptions of overall community resilience: Differences among subregions, 2014 and 2016



Differences between Out-of-town and In-town

Similarly for community wellbeing, in both 2014 and 2016 there is a pattern for people who live out of town to perceive community resilience as lower than those people who live in town, as shown in Figure 24. This difference is statistically significant; however, there has been no real change for perceived levels of community resilience from 2014 to 2016 in either group.

Figure 24 Perceptions of overall community resilience: Differences between Out-of-town and In-town, 2014 and 2016

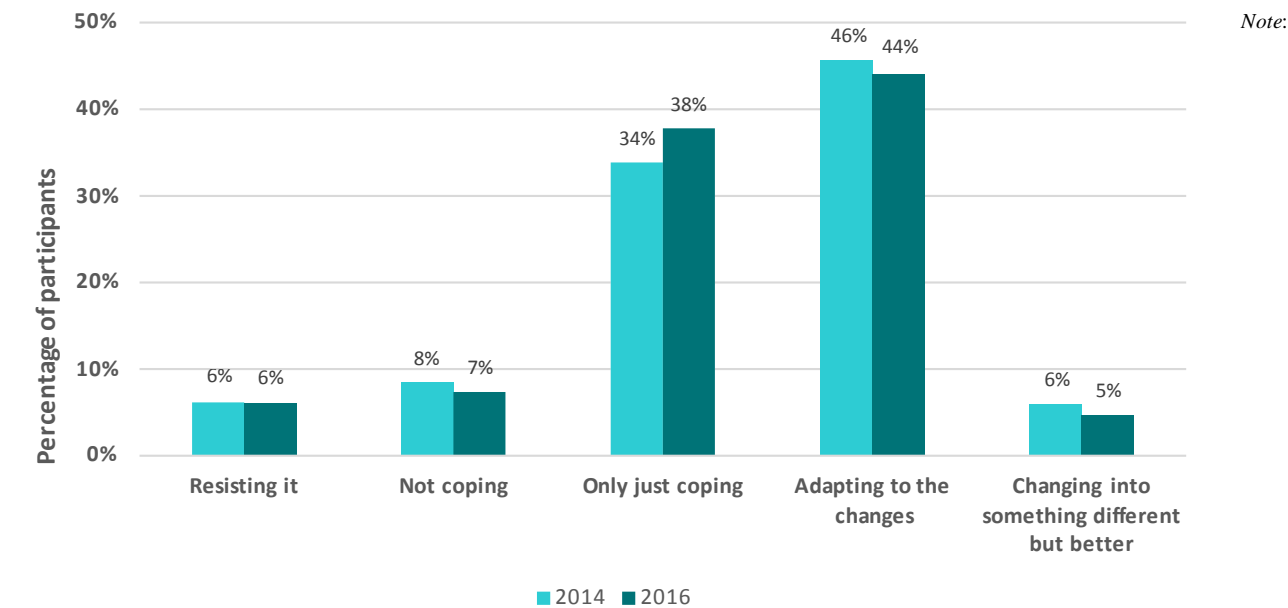


4.1.2 ADAPTING TO CSG DEVELOPMENT

Level of community adaptation to CSG activities

There were no significant differences in perceived community adaptation to CSG activities between 2014 and 2016. They remained about the same. This relates to how residents' perceive their community is dealing with the CSG activities. While the most common perception was that their community was adapting (44% of participants), Figure 25 shows there was also a considerable percentage who thought their community was only just coping.

Figure 25 Community perceptions of adapting to CSG development: 2014 and 2016

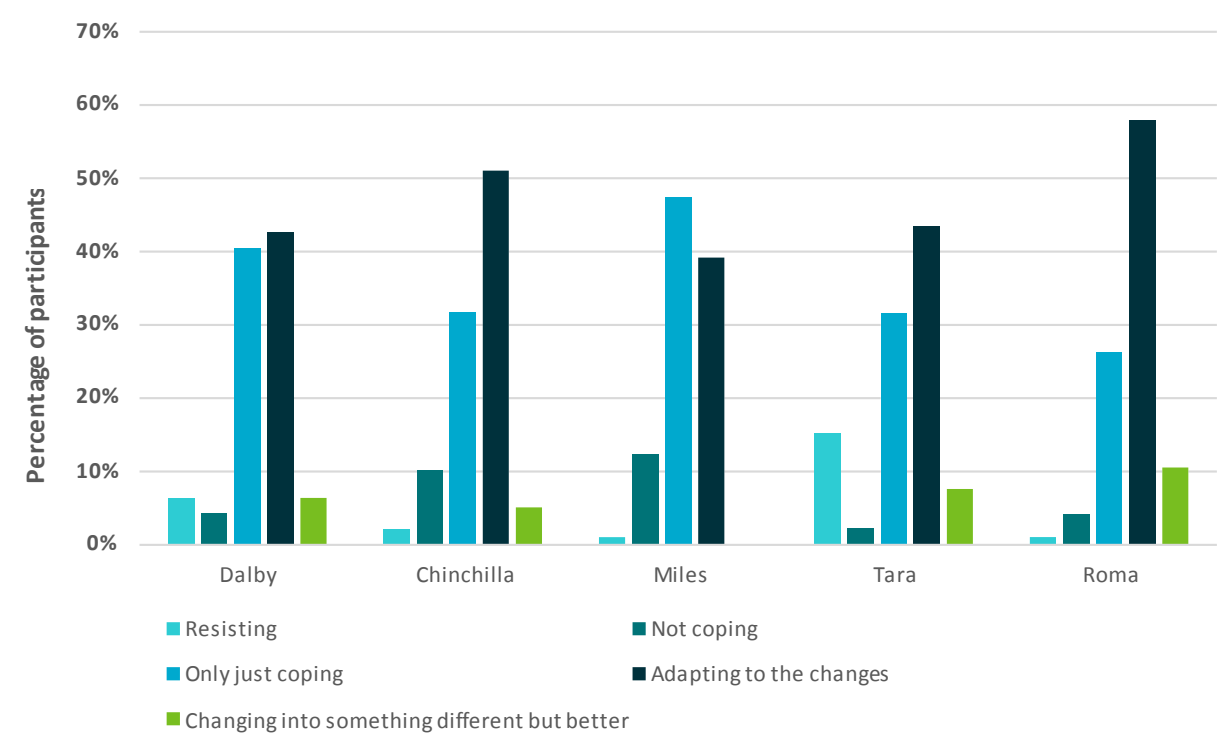


Differences between 2014 and 2016 were not significantly different

Differences among subregions

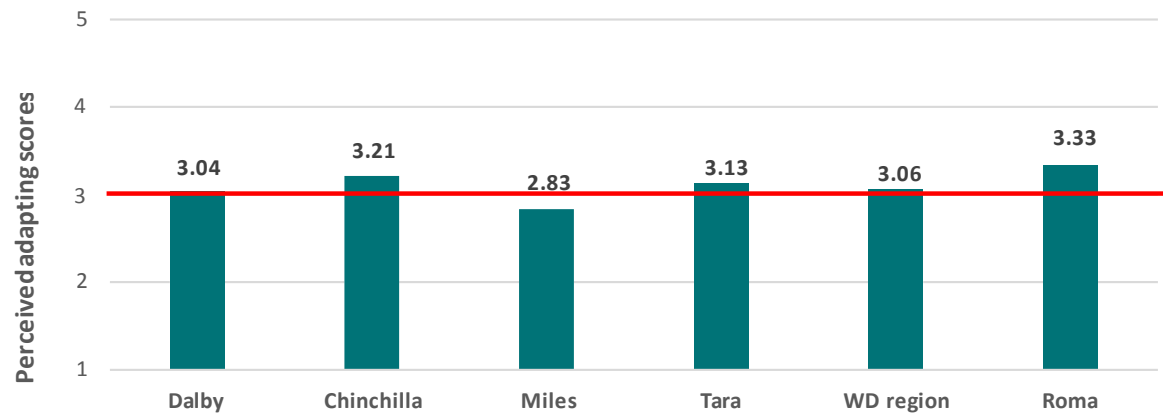
As in 2014, there are differences among the subregions in 2016 in how people perceive their community is dealing with changes associated with CSG development. Roma is included as a point of comparison, see Figure 26.

Figure 26 Perceptions of community adaptation to CSG development in 2016: Differences among the subregions



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 and the mean for the Western Downs was 3.06, where 3 = neither agreeing nor disagree on average. However, the mean for Roma was significantly higher than for Miles ($M = 3.33$ and $M = 2.83$ respectively). This can also be seen in Figure 27 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 27 Perceptions of how well the local community was adapting to CSG activities: 2016



Most important components of community adapting

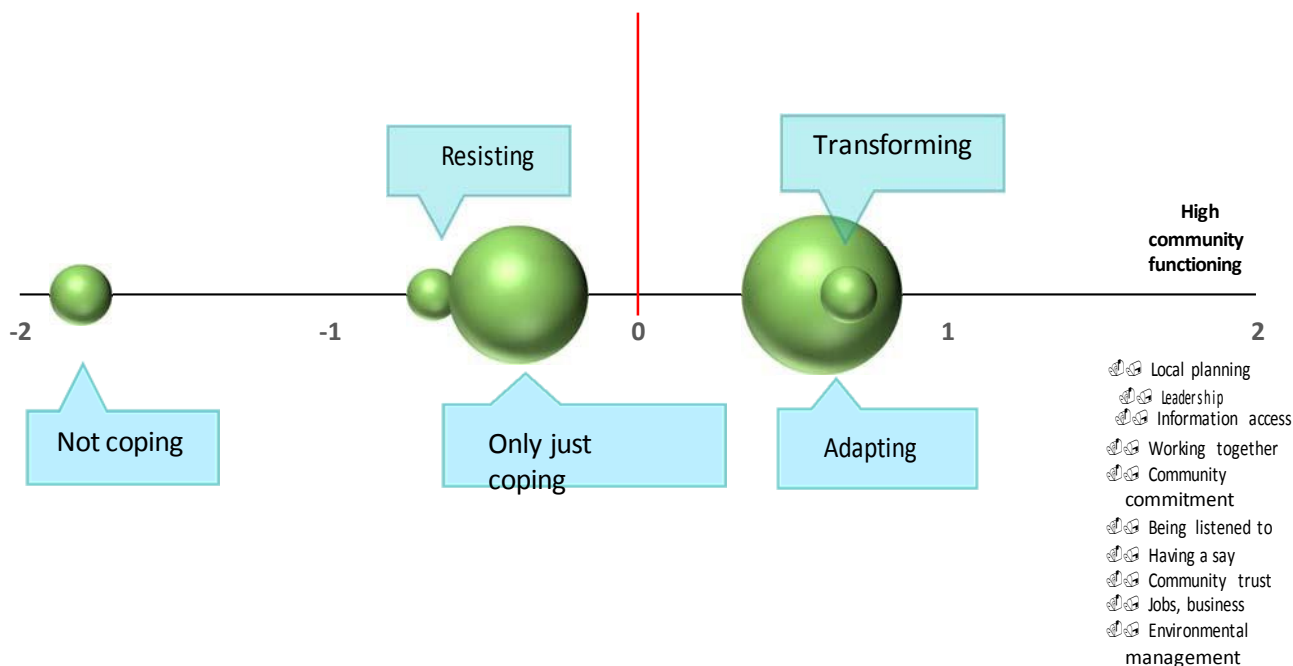
To identify the important drivers of community adaptation we used statistics to explain people's attitudes towards how their community was dealing with CSG changes. We found that when people felt there was a high level of community functioning then they felt that their community was adapting well to the changes. High community functioning comprises a mix of wellbeing dimensions and resilience actions. These can be considered the 'ingredients' that help a community feel that they are adapting well to CSG development. See Appendix C for details on the multivariate statistics used to determine the components of 'community functioning'.

High community functioning

- 👤👤 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

We mapped different perceptions of adapting to different levels of 'community functioning'. See Figure 28. When people believe community functioning is high they perceive their community as adapting or transforming into something better. When they view community functioning as low they view their community as only just coping or resisting. When they view community functioning as very low, they see their community as not coping. Interestingly, perceptions that the community is resisting CSG is not related to very low levels of community functioning as are the perceptions of the community not coping.

Figure 28 Perceptions of community adaptation mapped to perceived levels of community functioning, 2016

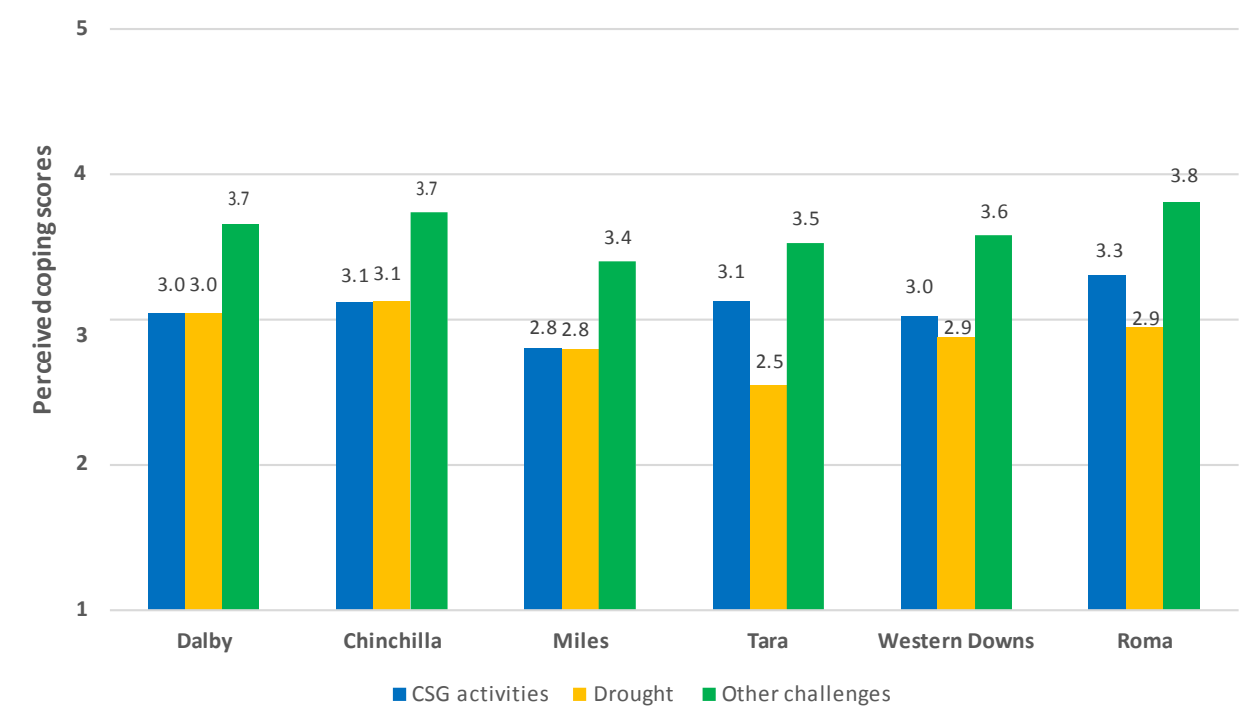


Coping with CSG activities, drought, and other community challenges

To better understand people’s perceptions of coping with CSG development, we included a comparison with the drought. In 2016, we asked residents how much they agreed that their community was coping with CSG activities, as well as with drought, and facing other challenges. Generally, communities perceived they did not cope as well with CSG and drought as they did with other challenges that were facing their community.

In addition, results indicated that people in general across the Western Downs and eastern Maranoa felt there communities were coping less well with drought than with CSG development, with significant differences experienced in Tara and Roma. Notably, residents indicated that their communities were not coping well with the challenges of drought (M = 2.9 and M = 2.9 respectively), with Tara and Miles reporting the lowest levels (M = 2.5 and M = 2.80 respectively), as shown in Figure 29. Tara and Miles are the most rural of the subregions, so it is not surprising that they are most affected by the drought. Furthermore, Miles indicated that on average people felt that their community was not coping well with CSG changes (M = 2.80).

Figure 29 Perceptions of community coping with CSG activities, drought, faced with challenges: Differences among subregions, 2016



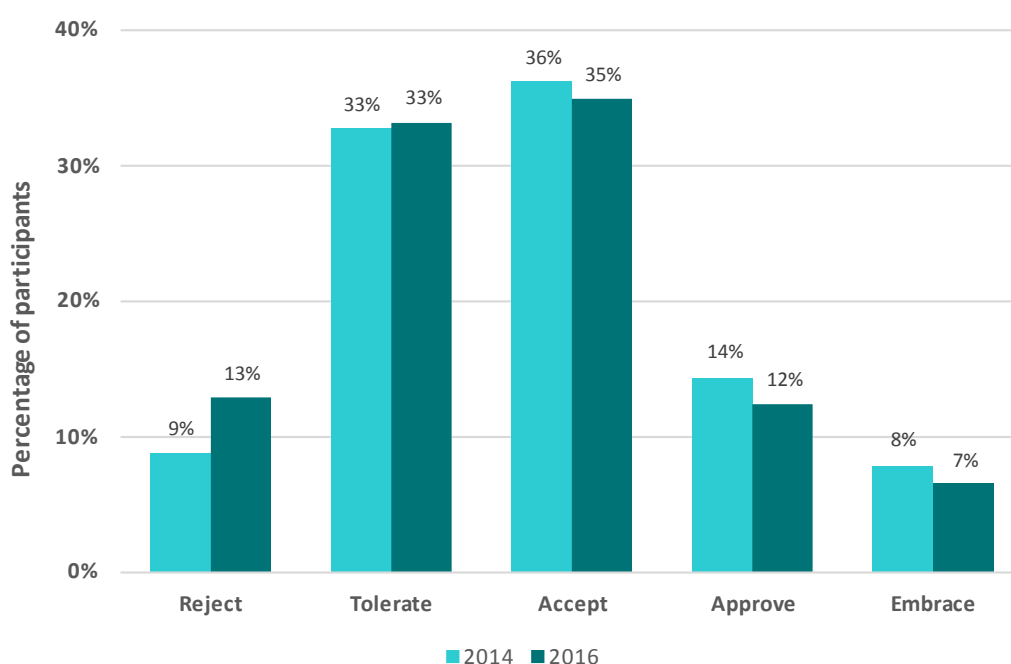
5 Community acceptance of CSG development: Attitudes and Feelings

5.1.1 ATTITUDES TOWARDS CSG DEVELOPMENT

In 2016, attitudes towards CSG development demonstrated a similar pattern of acceptance to 2014, with a spectrum of views ranging from reject through to embrace. At each end of the spectrum there are people who reject (13%) and those who embrace (7%). However, the majority of people (80 %) indicated more moderate views with people either tolerating (33%), accepting (35%), or approving (12%). This pattern of a large majority holding moderate views is similar in 2016 as 2014.

However, there has been a shift to the left end of the spectrum with the largest change being an increase in the 'reject' view in 2016 (2014 = 9%, 2016 = 13%). See Figure 30.

Figure 30 Attitude towards CSG development in the Western Downs region: 2014 and 2016



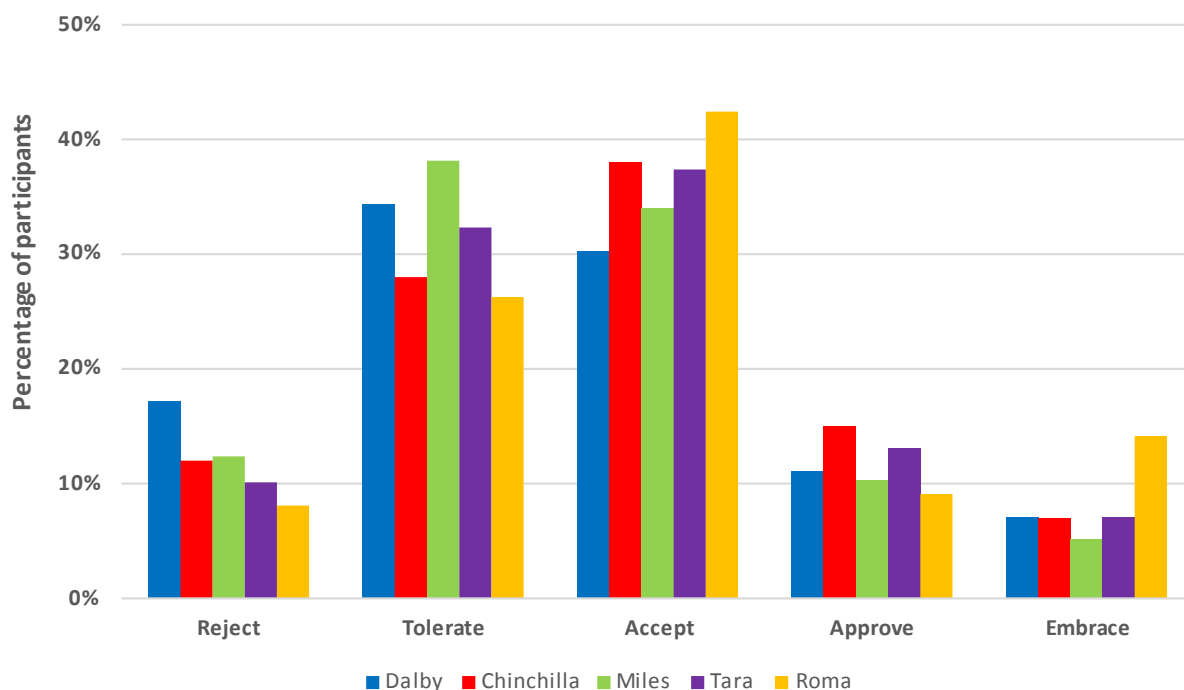
Note: There was a tendency for this distribution to shift to the left ($p < .10$); however, the change in any particular category was not significant

Difference among subregions

In 2014, attitudes towards CSG development showed differences among subregions in the Western Downs with Chinchilla having a significantly more positive attitude toward CSG development than in Miles. However in 2016, there were no significant differences among subregions in the Western Downs.

By comparison, Roma residents had significantly more positive attitudes towards CSG development than residents in the Western Downs region (see Figure 31).

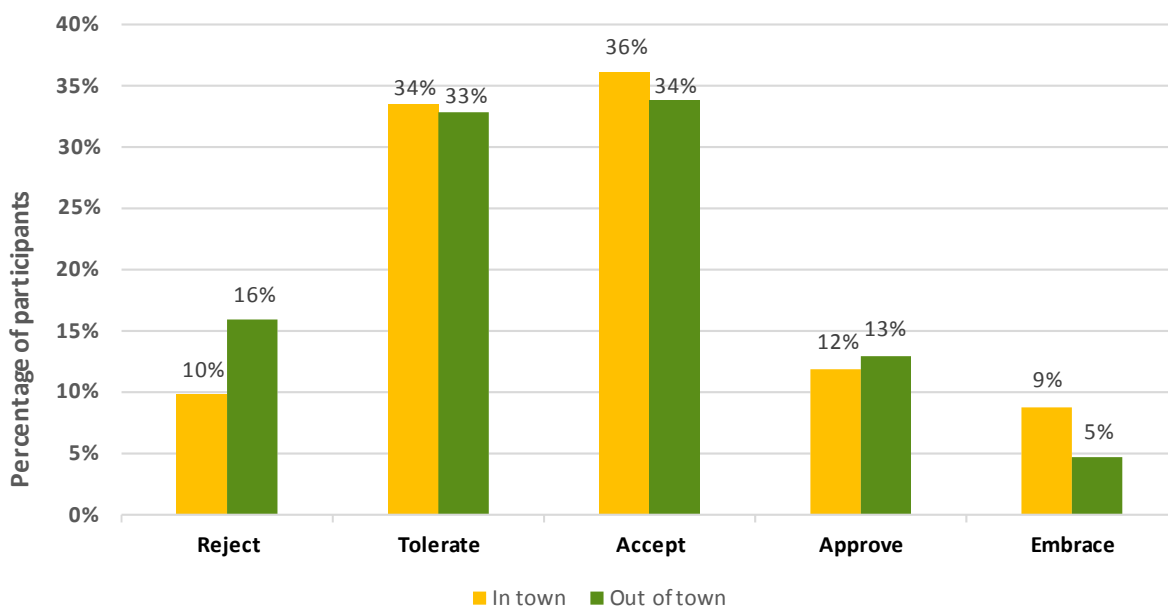
Figure 31 Attitudes towards CSG development 2016: Differences between subregions



Differences between Out-of-town and In-town

In addition, in 2016, there were differences in attitudes towards CSG between those who live in-town and those who live out-of-town – those who live out-of-town indicating more negative attitudes, as shown in Figure 32. This pattern is similar to 2014.

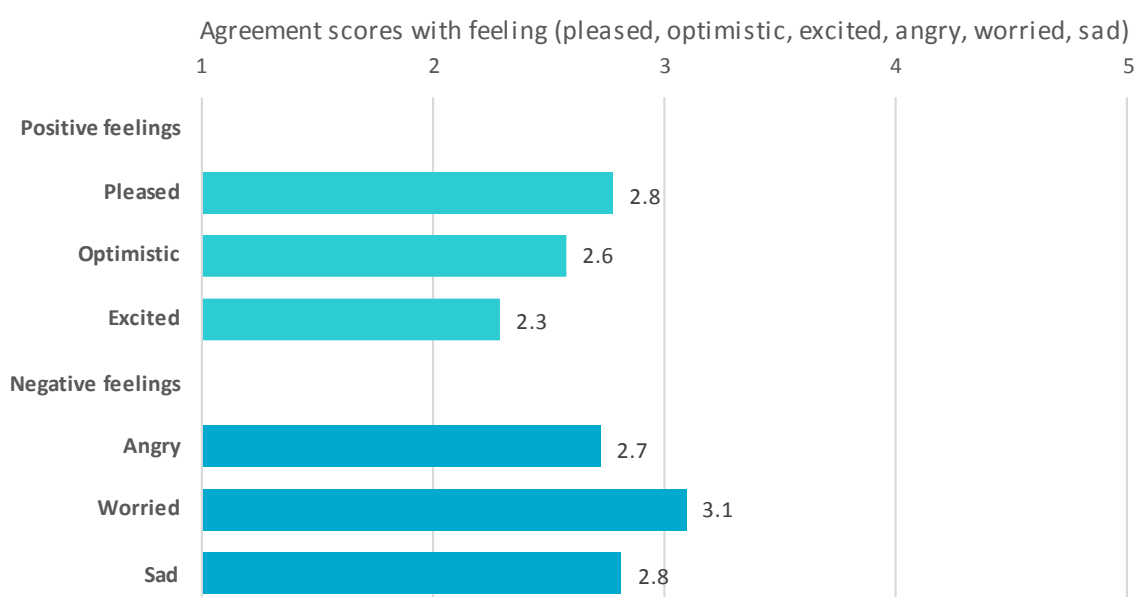
Figure 32 Attitude towards CSG development in the Western Downs region 2016: In-town and Out-of-town



5.1.2 FEELINGS TOWARDS CSG DEVELOPMENT

In 2014, feelings towards CSG development were completely mid-line or neutral on average across the region ($M = 3.0$). However, in 2016, there has been a significant but small increase in negativity compared to 2014. In 2016, the Western Downs on average held negative feelings towards CSG development ($M = 2.83$) using the six items to measure feelings – three that measured positive feelings (feeling pleased, optimistic, and excited) and three that measured negative feelings (feeling angry, sad, and worried). Figure 33 shows a general lack of positive feelings associated with CSG development (all significantly below 3), especially about being ‘excited’ about opportunities with CSG. On the other hand, residents were not overly negative toward CSG development, disagreeing about being sad or angry on average (both significantly below 3). Residents agreed more with being worried about how things are changing because of CSG, though this was not significantly above 3.

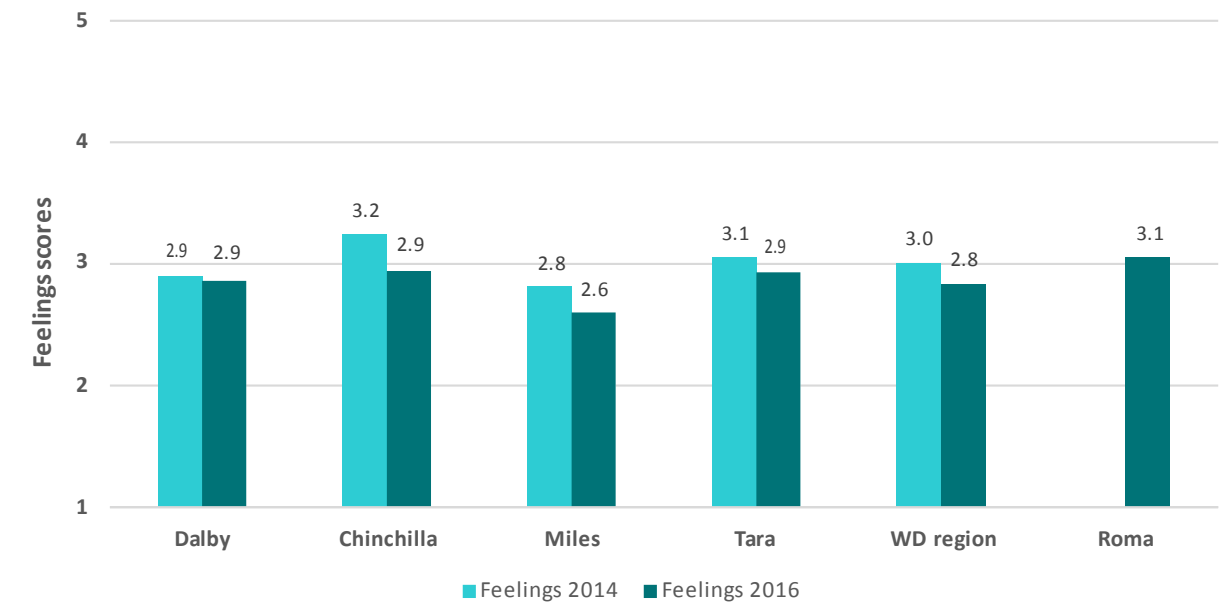
Figure 33 Positive and negative feelings toward CSG development in the WD region in 2016



Differences among subregions

All subregions in the Western Downs region indicated negative feelings on average towards CSG development in 2016. Moreover, Chinchilla and Miles have shifted from positive feelings on average in 2014 to negative feelings in 2016, with the change in Chinchilla statistically significant. Roma is included in Figure 34 for comparison, and notably it has more positive feelings on average towards CSG development and is statistically higher than the town and surrounds of Miles.

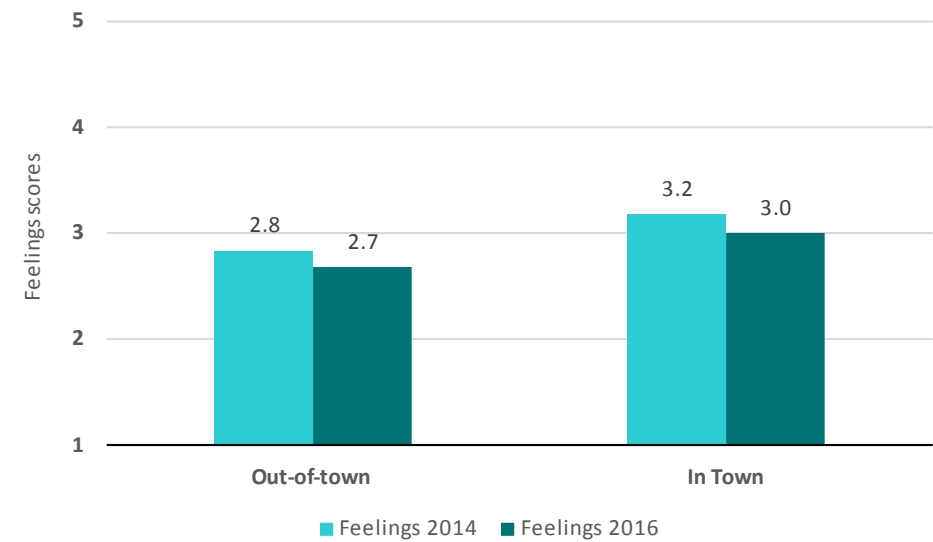
Figure 34 Feelings towards CSG development: Differences between towns, 2014 and 2016



Differences between people who live in town and out of town

In 2016, there are still significant difference in feelings towards CSG based on whether a person lives in or out of town. Those people who live out of town feel more negative, on average, about CSG than those who live in town, a statistically significant difference. Of interest is the change in people’s feelings who live in town. In 2014, these feelings were generally positive, but in 2016 feelings had a tendency to be more neutral on average. Whereas, for people who live out of town their feelings had remained negative and relatively unchanged. This is shown in Figure 35.

Figure 35 Feelings Out-of-town and In-town: 2014 and 2016



5.1.3 MOST IMPORTANT DIMENSIONS FOR COMMUNITY ACCEPTANCE

Underlying drivers of attitudes and feelings towards CSG activities

We used a multiple regression analysis to identify the important drivers of attitudes and feelings toward CSG. See Appendix C for statistical details.

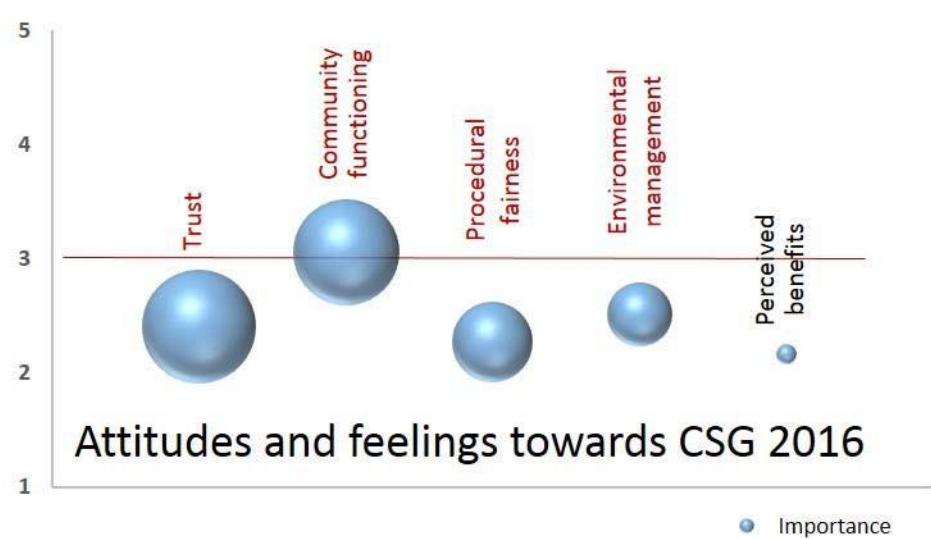
To identify which dimensions to include in our modelling of community acceptance we drew from our earlier discussion of community acceptance in the Introduction section. As shown in Table 7, we identified survey items and dimensions that related to CSG activities in terms of trust, procedural fairness, environmental management, perceived benefits, and community functioning to explain the extent to which people accept CSG development. Community functioning represents a combination of soft governance activities (planning, leadership, and collaboration) and other resilient actions as set out earlier in Figure 28.

Table 7 Items used to predict attitudes and feelings towards CSG activities 2016

Predictors of community wellbeing	
Items used	
Trust in CSG companies	(Trust)
CSG companies include local residents in their decision making	(Procedural fairness)
Satisfaction with the environmental management of underground water for the future	(Environmental management)
Local businesses are doing well out of CSG activities	(Perceived benefits)
Perceptions of community adapting to CSG development	(Community functioning)

We found that all items were important predictors of attitudes and feelings towards CSG except for perceived benefits, which measured perceptions that local businesses were doing well out of CSG activities. Figure 36 shows the predictors ordered by their importance with significant predictors coloured red.

Figure 36 Predictors of attitudes and feelings towards CSG 2016 ordered according to importance



Note: Red font denotes the most important, statistically significant predictors of attitudes and feelings; the size of the bubbles indicates the relative level of importance of that dimension to attitudes and feelings, the height of the bubbles indicates level of satisfaction with dimension

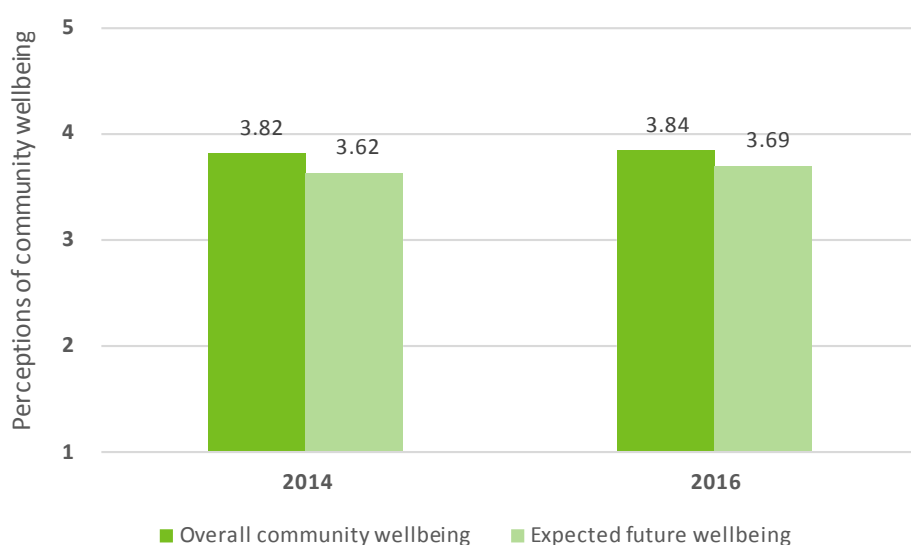
Trust in CSG companies was the most important predictor, and it was also relatively low in the WD region (M = 2.41 on average). Thus, improving trust is a potential focus for increasing community acceptance of CSG activities. Perceptions of procedural fairness also underlie trust (Moffat and Zhang, 2014). So, improving perceptions around inclusive decision making and governance around managing underground water may also improve trust in CSG companies and community acceptance of CSG.

6 Expected future community wellbeing

In 2014, residents in the Western Downs expected their overall community wellbeing to decline significantly in the following three years from an average score of 3.82 to 3.62. However, as we saw in section 3.1.1, overall community wellbeing in the Western Downs region remained virtually unchanged between 2014 and 2016 (i.e. $M = 3.82$ and $M = 3.84$, respectively). Thus, the slightly pessimistic outlook of expected future wellbeing in 2014 was not borne out in 2016.

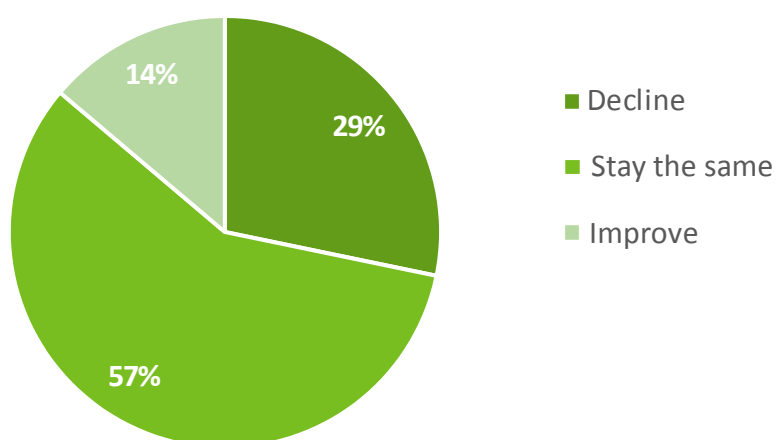
Notwithstanding this, Western Down's residents in general have a similar level of pessimism in 2016, expecting their overall community wellbeing to decline from 3.84 to 3.69 on average over the next three years. See Figure 37.

Figure 37 Comparing overall community wellbeing with expected future wellbeing in 2014 and 2016



In 2016, almost three in ten residents think that their future community wellbeing will decline (28.9%), while only 13.7% think it will improve. However, most residents think that their future community wellbeing will remain about the same (57.4%) in the Western Downs region, as shown in Figure 38.

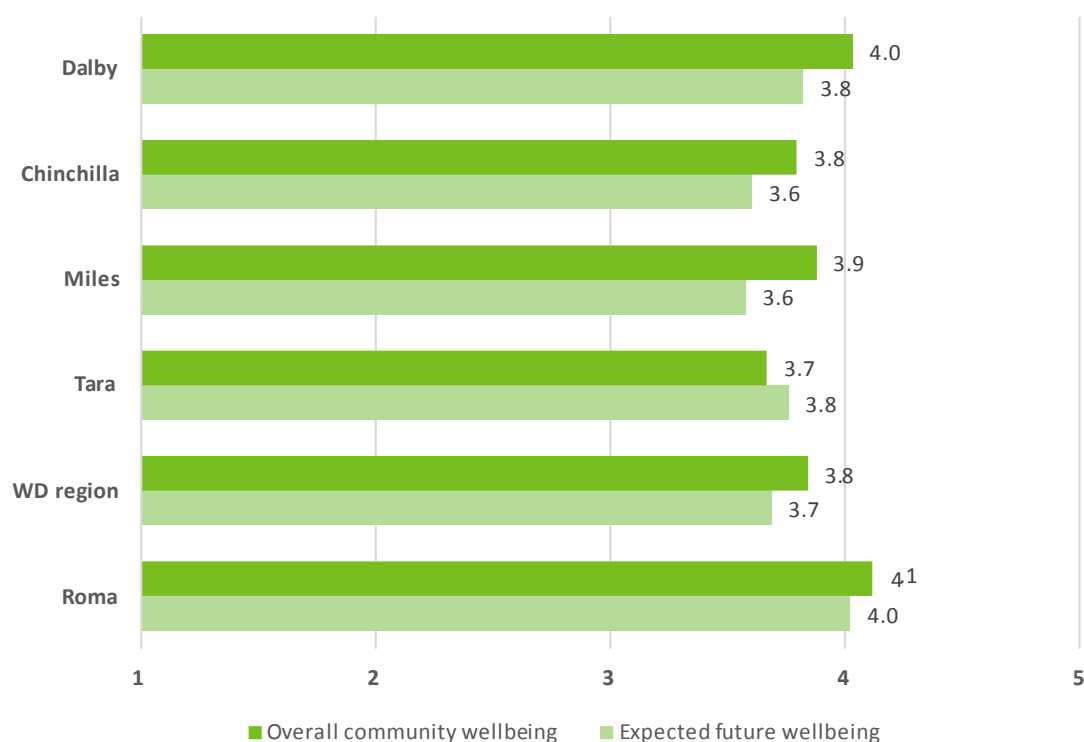
Figure 38 Percentage of participants who expected future wellbeing to decline, stay the same or improve, 2016



Differences among subregions

However, not all subregions expected their future community wellbeing to decline on average. Only Dalby Chinchilla, and Miles expected their future community wellbeing to decline significantly from their 2016 level of overall community wellbeing. Tara and Roma expected their future community wellbeing to stay about the same (see Figure 39).

Figure 39 Comparing overall community wellbeing and expected future wellbeing in 2016 by subregion



Differences between Out-of-town and In-town

Generally speaking, those living in-town expected their future community wellbeing to decline significantly, though the expected decline was not significant for those living out-of-town (Figure 40). This contrasts with 2014 where both those living in- and out-town expected a significant decline.

Figure 40 Comparing overall community wellbeing and expected future wellbeing in 2016: Out-of-town and In-town



6.1.1 UNDERLYING DRIVERS OF EXPECTED FUTURE COMMUNITY WELLBEING

Expectations of future community wellbeing were largely driven by perceptions of current levels of community wellbeing and community resilience, and the strength of someone's attachment to place (see Table 8). When wellbeing and resilience were perceived to be strong then people held more positive views about the future wellbeing of their community. Similarly, the stronger a sense of belonging and attachment to place the more positive about its future. See Appendix C for statistical details.

Interestingly, community attitudes and feelings about CSG development were a significant driver of expected future wellbeing in 2014, but not so in 2016. This means that in 2016 expectations about wellbeing into the future were irrespective of people's views about CSG. Whereas in 2014, expectations about future wellbeing were linked to whether or not your attitudes and feelings about CSG were favourable or unfavourable. Moreover, expectations about the future are strongly linked to how well communities are responding to change, that is, their community resilience.

These findings suggest the importance of a community acting proactively and being committed to its future in order to support a sense of optimism going forward. Even if current wellbeing is high, it needs to be combined with effective community resilient actions including a strong belief of being able to work together effectively when responding to change to drive high levels of expected future wellbeing. If people are not satisfied with community resilient actions and do not believe local residents, government, business and resource companies can effectively work together they will feel less confident about the future of their community.

Table 8 Summary of underlying drivers of expected future community wellbeing, Western Downs region: 2014 and 2016

Significant predictors of expected future community wellbeing 2014	Significant predictors of expected future community wellbeing 2016
Community wellbeing	Community wellbeing
Place attachment	Place attachment
Community resilience	Community resilience
Community attitudes and feelings towards CSG	
Non-significant predictors:	Non-significant predictors:
Nil	Community attitudes and feelings towards CSG

7 Demographic differences and miscellaneous items

7.1.1 FARM OWNERS

There were some demographic differences based on owning a farm or not. In 2016, farm owners reported lower perceptions of community resilience and less positive attitudes and feelings towards CSG activities than non-farm owners. There were also differences in perceptions of five of the underlying community wellbeing dimensions. Farm owners indicated higher levels of personal safety, health, community participation, and environmental quality (less dust and noise) than non-farm owners. However, farmers reported significantly lower perceptions of services and facilities. See Appendix F for details.

For farmers, there was minimal change from 2014 to 2016 in perceptions of community wellbeing, community resilience, and attitudes and feelings towards CSG development. In contrast, expected future wellbeing for farmers improved significantly in 2016 from 2014. Attitudes and feelings toward CSG remained negative and relatively stable for farm owners over the two year period, and were still significantly lower than those of other residents in both 2014 and 2016.

Figure 41 Farmers perceptions: 2014 and 2016



Note: Scores have been rounded to one decimal point and may not correspond exactly to values on the horizontal axis

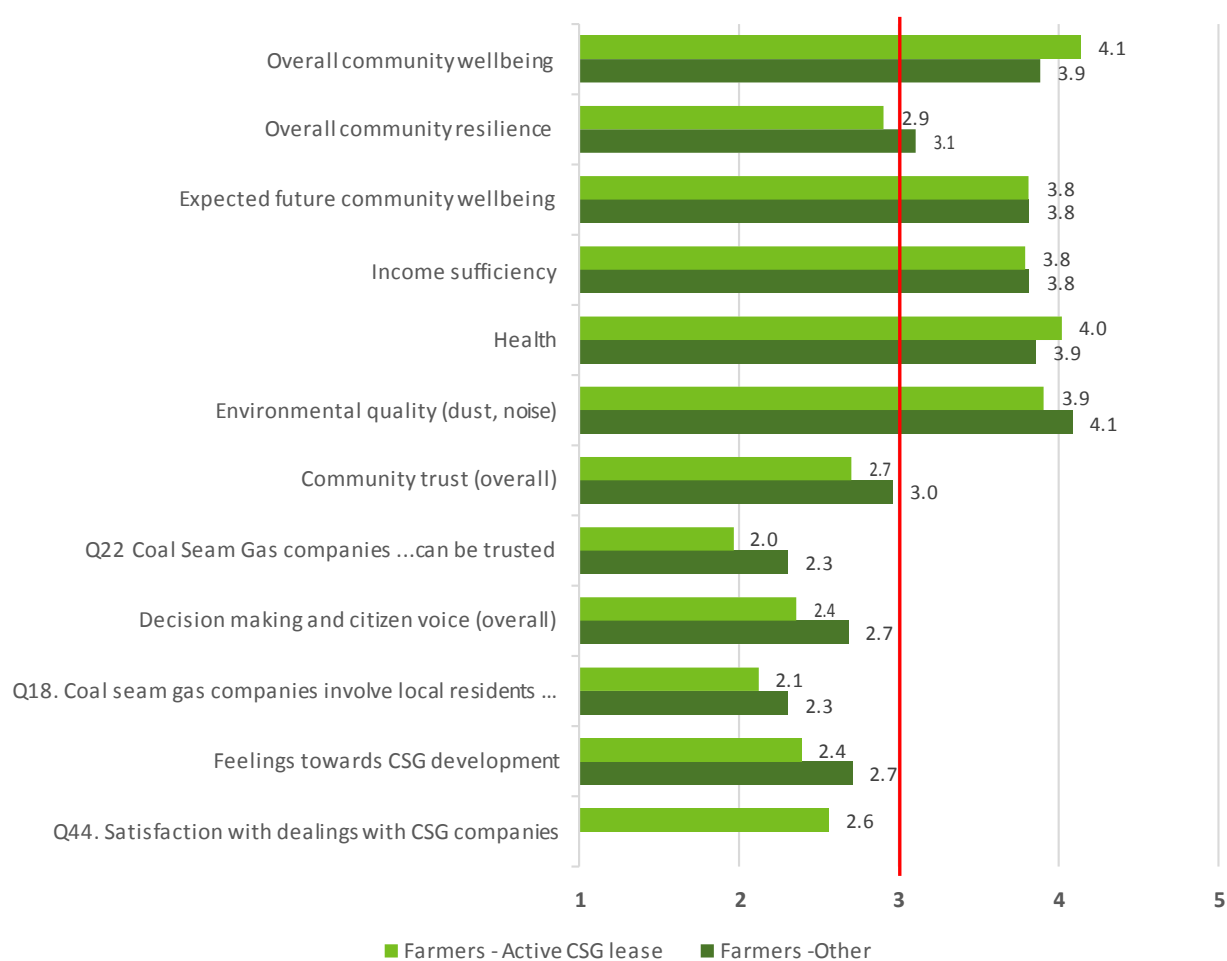
Farmers with CSG leases

In the 2016 survey, by combining the Western Downs sample with the Roma sample there were sufficient numbers of farmers with CSG wells to undertake comparisons with other farmers. However, in interpreting these results we need to acknowledge that sample sizes are still small. Of 154 farmers, 32 farmers had CSG leases which were 'active', either with functioning wells or with negotiations in place or underway. Twenty eight farmers had CSG leases that were 'dormant' (i.e., no negotiations or wells were in progress), and 94 farmers had no CSG leases. We compared farmers with 'active' leases with 'other farmers' (a combined group of farmers with dormant CSG leases and no CSG leases).

There was a tendency for farmers with active CSG leases to rate overall community wellbeing more highly. However, there were no statistically significant differences between farmers with active leases and other farmers in perceptions of community resilience, expected future wellbeing, nor attitudes and feelings towards CSG activities.

We also looked specifically at the dimensions of community wellbeing that were more individually based, that is, those dimensions that reflected individual situations rather than perceptions of community as a whole, for example, health, income sufficiency, and environmental quality (level of dust and noise). Results showed no significant differences among these two groups of farmers. However, there was a tendency for farmers with active CSG leases to have lower ratings for community trust, and decision making and citizen voice. Finally, we analysed a question specific to farmers with active CSG leases, which indicated that overall satisfaction with CSG engagement was on average negative for those with active CSG leases. See Figure 42.

Figure 42 Comparison of farmers with active CSG leases and all other farmers, 2016



Note: Scores have been rounded to one decimal point and may not correspond exactly to values on the horizontal axis

7.1.2 OTHER DEMOGRAPHIC DIFFERENCES

Results indicated that there were some demographic differences based on gender, income levels, age, and newness to the community in perceptions of community wellbeing, community resilience, expected future community wellbeing, and attitudes and feelings towards CSG development. Some differences were also found in the underlying dimensions of community wellbeing. A brief summary is provided below and detailed tables of specific demographic differences are found in Appendix F .

Subregions

There were a range of significant differences between the subregions which can be seen in Appendix F . Interestingly, some of these differences in the Western Downs regions were related to the population size of each subregion. Residents in the larger subregions had more favourable evaluations of services and facilities, employment and business opportunities, and overall community wellbeing. However, in smaller subregions, residents rated personal safety and community participation higher than other subregions in the Western Downs. By comparison, Roma residents had significantly more favourable evaluations on most dimensions of community wellbeing, community resilience, expected future community wellbeing, and attitudes and feelings towards CSG development.

A further breakdown for all survey items by subregion is shown in Appendix E. In particular Appendix E.2 shows items which changed significantly between 2014 and 2016 for each subregion. Dalby experienced the fewest changes between 2014 and 2016. However like other subregions in the Western Downs, it experienced significant decreases in employment and business opportunities, though a significant increase in the overall quality of the general environment (e.g., dust and noise). In Dalby there was also a significant improvement in key people knowing the right people to get things done.

Chinchilla had more items declining in 2016 than other subregions, though from comparatively high levels in 2014. As well as employment and business opportunities, there was a significant decline in items relating to perceived personal safety, physical health, community cohesion and collective efficacy. However, items relating to road safety and the amount of traffic improved significantly. Miles also experienced significant declines in employment and business opportunities, as well as trust in State Government. However, items relating to roads, the general environment (e.g., dust and noise), and sustainable management of local farming all improved. These changes may relate to a decline in CSG development activity. Tara experienced similar changes to Miles, however medical and health services improved significantly in Tara between 2014 and 2016.

Feelings toward CSG development declined significantly in the Western Downs region overall between 2014 and 2016, though not in any particular subregion. This general decline related to feeling less positive about CSG, more so than feeling more negative about CSG development in the region.

Place of residence: in-town and out-of-town

Residents living out-of-town had significantly more favourable evaluations of environmental quality while residents living in town had significantly more favourable evaluations of services and facilities, community trust, employment and business opportunities, overall community wellbeing, overall community resilience, and overall attitudes and feelings toward CSG.

However, the significant differences in employment and business opportunities and in overall community wellbeing could be accounted for by the size of each subregion. Exploring this further, the differences in employment and business opportunities between in-town and out-of-town residents was larger in subregions of Chinchilla and Dalby, but not very different in the smaller subregions of Miles and Tara. In contrast, the differences between in-town and out-of-town residents in overall community wellbeing was larger in the smaller subregions of Miles and Tara, and not very different in the larger subregions of Chinchilla and Dalby.

Age

There were some differences based on age. Older people had significantly higher perceptions of community resilience, expected future community wellbeing, and place attachment. There were also differences based on age in five of the underlying community wellbeing dimensions (perceptions of personal safety, services and facilities, roads, community trust, and satisfaction with social interactions). Young adults (under 35) were less satisfied with personal safety while older persons (over 55) were satisfied on the other dimensions except for their social interaction.

Gender

There were no significant differences based on gender other than two of the underlying community wellbeing dimensions (social interaction and environmental management for the future). Women had higher levels of social interaction and lower satisfaction with environmental management for the future.

Income

There were minimal differences based on income. Notably, people with the highest income levels had significantly more positive attitudes and feelings towards CSG development. There were also five differences in community wellbeing dimensions based on income (perceptions of income sufficiency, services and facilities, and roads, and satisfaction with social interaction and community participation). Higher income households had higher satisfaction on these dimensions except with roads.

Newness to the community

There were several differences based on how long someone had lived in the community. Those who had lived in the community the longest had significantly more positive perceptions of community wellbeing, expected future community wellbeing, and place attachment. They also viewed three of the underlying dimensions of community wellbeing more favourably (community spirit, services and facilities, and roads).

Owning a farm or not

Many dimensions of community wellbeing were considered more favourable by those owning a farm: environmental quality, personal safety, health, and community participation. However, services and facilities was rated less favourably by farm owners, as were their attitudes and feelings toward CSG activities, and overall community resilience to CSG activities.

Miscellaneous items: rent and job security

Two items in the survey about housing stress and satisfaction with job security, which did not align with the main community wellbeing measures, are reported separately here for the Western Downs region.

7.1.3 RENT OR MORTGAGE IMPACT ON HOUSEHOLD FINANCES

This was measured with a single item measure of housing stress asking how much respondents agreed that their rent or mortgage repayments impacted greatly on their household finances. Surprisingly, perceived housing stress was not high on average in the WD region in either 2016 or 2014. Residents rated it 3.22 out of 5 in 2016 which was not significantly different to 3.28 in 2014, and significantly lower than 3.6 in other areas in rural Queensland in 2013 (Morton & Edwards, 2013). Housing stress for renters was higher than for other residents ($M = 3.52$ and $M = 3.16$ respectively), though it was not significantly different. However, it was statistically different when Roma was included ($M = 3.66$ and $M = 3.19$ respectively). Note that nearly 4 in 5 low income households in the Western Downs (with less than \$40,000 per annum) in 2016 were not renters but owned their own home.

7.1.4 SATISFACTION WITH JOB SECURITY

The survey asked residents how satisfied they were with their job security, if applicable. Job security in 2016 was not significantly different to 2014 (3.88 and 4.01 respectively). This was in contrast to perceived job opportunities in the local area which did significantly decline between 2014 and 2016 (3.12 to 2.20 respectively).

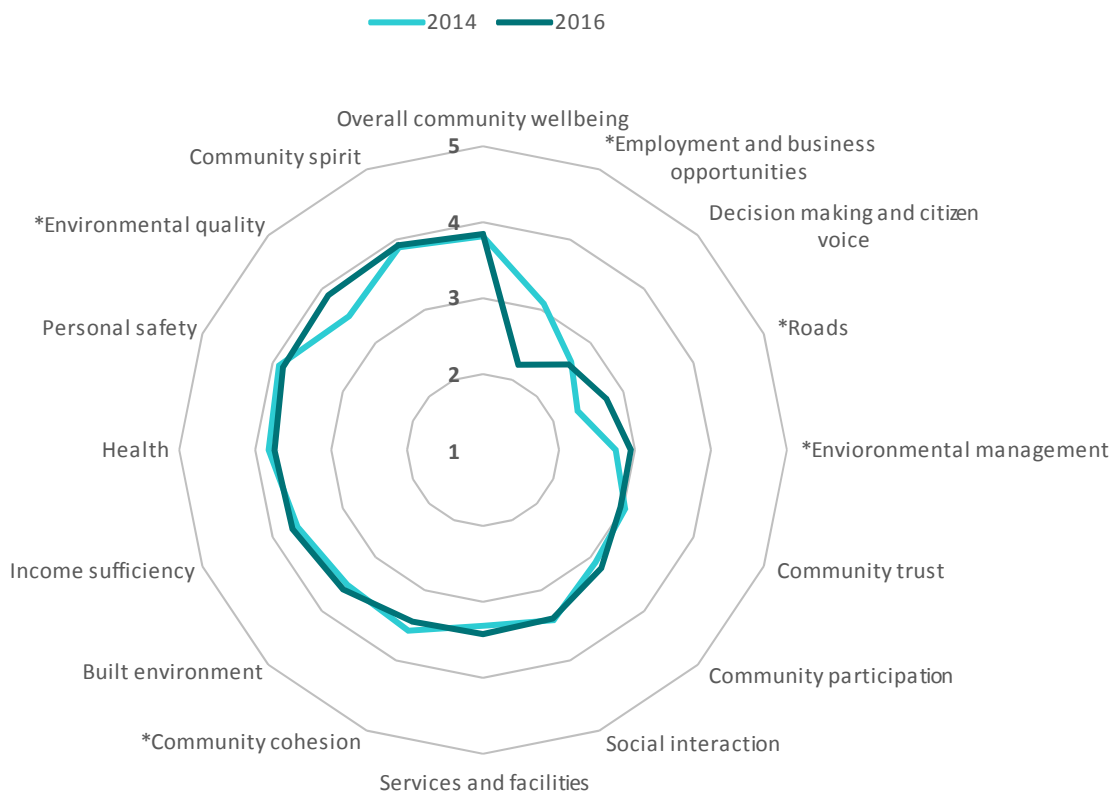
8 Conclusion

Monitoring community wellbeing over time

This research has analysed changes in community wellbeing over a two year time period by comparing baseline data collected in February 2014 during the construction phase with data collected in February 2016 in the post-construction phase. The report identifies areas in which community wellbeing has improved and areas where it has diminished. Importantly, we have identified the underlying drivers of community wellbeing and how these differ from 2014. Understanding these drivers provides valuable information on where to focus scarce and valuable resources so that programs and interventions can help strengthen community wellbeing.

The biggest changes were the drop in satisfaction with employment and business opportunities and improvements in satisfaction with roads and the quality of the environment (dust and noise). These positive and negative effects balanced each other so that overall wellbeing was unchanged since 2014, some dimensions had improved and some had decreased. Employment and business opportunities had become a significant driver of community wellbeing in 2016, along with levels of services and facilities, personal safety, and the social aspects of community life (social interactions and community spirit). As shown in Figure 43, the less satisfactory community wellbeing dimensions are shown from 1 to 3 o'clock on the chart below (i.e., the collapsed side of the circle).









Figure 43 Community wellbeing dimensions 2014 and 2016



Adapting to CSG development

The report provides valuable feedback on how the community perceives it is responding and adapting to CSG development, how this has changed over the two years, and how this compares to other challenges such as drought. Generally speaking, communities in the Western Downs thought they were coping with CSG activities about as well as they were coping with the drought, though not as well as when faced with other challenges.

We have identified the important components of high community functioning that indicate to a community that it is adapting and coping well (or not) to changes associated with CSG, which were:

-  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

These components are important because they offer an opportunity to direct strategies and activities that develop adaptive actions and the underlying resources and capabilities that support them.

Creating a positive future

We have analysed people's expectations of their community wellbeing into the near future, three years hence and compared this outlook to 2014. In both years, residents thought that community wellbeing would decline over the next few years. However, overall community wellbeing did not change significantly between 2014 and 2016.

We have shown the potency of combining effective resilient actions with the strengths of current community wellbeing to drive a sense of optimism and confidence about the future of a community. This knowledge affirms to communities the importance of strengthening those actions within a community that underpins strong resilient responses that can proactively respond to change and take a community forward.

Diverse views and feelings about CSG development

The report provides a valuable snapshot of the range of views that exist in a CSG community and how these have changed over time. Attitudes and feelings towards CSG activities in the region change were less favourable in 2016. They were lukewarm or neutral during the construction phase in 2014 but were unfavourable on average in 2016 after the end of the construction phase.

We have demonstrated how views can vary based on the towns and areas that people live in and that within these communities of place there are also differences. By understanding and respecting these different perspectives can help a community to maintain its cohesiveness and sense of fairness and empowerment. We have also identified key elements that are important to people if they are to be accepting of CSG development (trust, procedural fairness, environmental management, perceived benefits, and perceptions that the community is adapting well to the changes). Industry can respond accordingly by endeavouring to build and strengthen these aspects as ways of improving their relationship with the communities in which they operate.

Next steps

The next stage of the research involves discussion of our findings with community, government, and industry stakeholders. This will be an opportunity to discuss implications and to identify opportunities for collaborative actions. From this feedback and discussion we will summarise the implications of the research findings and possible outcomes going forward for the final report for this project.

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Appendix A Description of survey measures

A.1 Community Wellbeing measures

Personal safety asked how much residents agreed it was safe for various activities at night (to be alone at home, walk outside, or leave the car on the side of the road) as well as how safe they felt living in the area overall.

Income sufficiency asked how much residents agreed that their household income was enough for household expenses and the lifestyle they enjoy, as well as their overall satisfaction with their income covering their living expenses. Another item asked about how much rent or mortgage repayments impacted on their household finances; however, this item was not included in the income sufficiency scale because it reduced this measures reliability (i.e. it did not highly correlate with the other three items).

Health asked about satisfaction with diet and eating habits, exercise habits, physical and mental health, job security, as well as overall satisfaction with their health and wellbeing. However, an item for satisfaction with job security (if applicable) was not included because it reduced the reliability of the health scale.

Services and facilities was measured as satisfaction with local schools, child care facilities, sports and leisure facilities, food and other shopping, medical and health services, and community support services, as well as overall satisfaction with services and facilities in their local community.

Built environment asked about satisfaction with cleanliness in their town, parks and gardens, and satisfaction with the general appearance of their town.

Roads asked about satisfaction with the condition of and safety on the roads, and the amount of traffic on the roads, both in and around their town, as well as satisfaction with the roads.

Environmental quality asked about pollution and their satisfaction with the level of dust, noise, and the overall quality of the general environment in their community.

Environmental management asked residents to think about the natural environment and how satisfied they were with quality of underground water for the future; nature reserves for the future; sustainability of local farming land for the future; and the overall management of the natural environment for the future.

Decision making and citizen voice asked residents to think about how decisions are made affecting their local community and surrounds. It asked how much they agreed that the council keeps them informed; there are opportunities to be heard; and the CSG companies involved local residents in their decisions; along with an overall rating on their satisfaction with how decisions are made affecting their community.

Employment and business opportunities asked how much residents agreed that there were good job opportunities and that local businesses had done well out of CSG development, as well as their satisfaction with employment and business opportunities in their local area.

Community spirit asked residents how much they agreed that people can rely upon one another for help; have friendly relationships; can work together if there is a serious problem; as well as an item on their overall satisfaction with community spirit in their local area.

Community cohesion was about inclusiveness in the community and asked resident how much they agreed that their local community was welcoming of newcomers; welcoming of people of different cultures; and their community includes everyone no matter who they are.

Community trust asked residents about levels of trust in their local area relating to: community leaders; people generally around their local area; the Western Downs Regional Council; CSG companies; and State Government; as well as overall satisfaction with levels of trust in their local area.

Community participation asked residents how much they agreed that they: regularly helped out a local group as a volunteer (e.g., once a week); attended several community events in the past year; were an active member of a local organisation or club; and overall, regularly participated in a variety of community activities.

Social interaction asked residents about their everyday interactions with people, other than those they lived with. It asked how much they agreed that they regularly visited someone's home; went out together socially; spoke or texted on the phone; as well as their overall satisfaction with their level of social interaction locally..

Overall community wellbeing asked residents how much they agreed that their community was suitable for young children, teenagers, and for seniors, as well as how much they agreed their local area offered a good quality of life overall, and that they were happy living in their local area. An additional item 'This community is a great place to live' was included in this survey from the Regional Wellbeing Survey (Schirmer et al., 2015) but was not included in the overall community wellbeing measure to enable comparisons with the 2014 data.

Place attachment was measured by asking residents how much they felt they belonged to their local area; whether they would be pleased to come back if they went away; and their overall attachment to their local area. In 2014, it also included an item about how much they would like to be living in the area in 3 years time. However, this item was later dropped in the 2016 because of conceptual overlap with expected future wellbeing.

A.2 Community resilience and adaptation measures

Community resilience actions asked respondents to think about how their local community was responding to CSG development in terms of planning for the future, adequate leadership, accessing relevant information, developing key connections within the community, supporting volunteers, persevering, demonstrating good intergroup working relationships, and an overall evaluation of their satisfaction with the way the community was responding to change.

Community efficacy asked respondents to consider how well different groups (residents, government, business and resource companies) could work together to address problems or take advantage of opportunities in relation to CSG development.

Overall community resilience was the average of community resilience actions and collective efficacy items.

Level of community adaptation asked respondents their perception of how the community was dealing with CSG development – resisting it / not coping / only just coping / adapting to the changes / changing into something different but positive.

Community coping asked respondents how much they agreed that their local community is coping with CSG activities and how much it is adapting to CSG activities. These items provided alternative measures to the categorical community adaptation measure. Two other items were also asked for comparison purposes about whether they agreed their local community is coping with the drought and whether it copes pretty well when faced with challenges. However, these last two items were not included in the community coping measure which only related to CSG activities.

A.3 Community Acceptance measures

Attitude towards CSG asked respondents to choose which best described their attitude towards coal seam gas development in their region – I reject it / I tolerate it / I accept it / I approve it / I embrace it.

Feelings towards CSG development asked three items that included positively-valenced emotions and three items that included negatively-valenced emotions. Each item related to coal seam gas development and included: I feel pleased to have the coal seam gas resource boom in our region; when I look at what is happening around coal seam gas I feel optimistic; when I talk about the opportunities of coal seam gas I get excited; when I think about how much coal seam gas affects everyday life it makes me angry; when I think

about how things are changing because of coal seam gas I get worried; when I talk about coal seam gas I feel sad.

Attitude and feelings toward CSG was the average of items for both attitudes towards CSG and feelings toward CSG development.

A.4 Expected future community wellbeing measures

Expected future wellbeing asked residents to imagine what their local area might be like in three years time and how much that agreed that their area would offer a good quality of life and that they would be happy to be living in their local area.

Change expected in future wellbeing was measured by asking residents whether they expected their community wellbeing over the next three years would decline / stay about the same / improve. An open ended question was also asked about their main reason for thinking this. These questions were not asked in 2014.

A.5 Demographic questions

Participant interest was coded by the interviewers on a scale from 1 = very uninterested to 5 = very interested based on the interviewer's initial contact encouraging the selected resident to participate in the survey. It asked 'how interested did the respondent seem in the TOPIC when contacting them'.

Language skills was also coded by the interviewer using the question 'How well does the person speak English?': very well; well; not well; not at all. Note: only asked in 2014.

Aged over 18 was a yes/no screening question asking 'Are you 18 years of age or over?.'

Year of birth asked 'What year were you born in?'.

Gender was identified by the operator as either male or female.

Residence was a screening question asking whether participants lived in the survey area of interest. In 2014 this was the Western Downs Regional Council area and in 2016 the survey area of interest also included the Eastern Maranoa area as defined in Table 3 , which included the towns of Roma, Injune, Surat and their surrounds).

Local town assisted with quota sampling and asked 'Which local town and surrounding area do you feel most part of?' with the following options: Jandowae and surrounds; Dalby and surrounds; Chinchilla and surrounds; Miles and surrounds; Wandoan and surrounds; and Tara and surrounds. In 2016, Roma and surrounds; Injune and surrounds; and Surat and surrounds were added. Jandowae was later included with the Dalby area; Wandoan was including with the Miles area; and Injune and Surat were included in the Roma area.

Live in town also assisted with quota sampling and asked residents whether they lived in a town or out of town.

Employed similarly assisted with quota sampling asking 'Is your employment status working or not working?', where working was defined as deriving an income from work, either full-time or part-time.

Year start in region was the year the respondent first started living in the Western Downs region.

Household type was either couple with no children; couple with children; one parent family; single person household; group household (shared accommodation); or other household type.

Household income was an optional question asking about *taxable* household income with 4 categories: less than \$40,000; between \$40,000 and \$80,000; between \$80,000 and \$120,000; and more than \$120,000.

Employment situation was either working full-time (35 hours or more per week); working part-time (less than 35 hours per week); looking for paid work; studying full-time; caring or home duties full-time; receiving a government benefit or pension; self-funding retiree; or other.

Employment type for those working was either a permanent employee; on contract; a casual employee; or self-employed. Note: only asked in 2014.

Working in farming was a yes/no question for those working: 'Do you work in the farming sector (i.e., on a farm or for a farmer)?'.

Working in CSG was a yes/no question for those working: 'Do you work in the CSG sector (i.e. for a coal seam gas company or subcontractor)?'.

Friends or family in CSG asked 'How many of your friends or family work in the CSG sector (i.e. for a coal seam gas company or subcontractor)?' with the options: none; one or two; some; or many.

Own a farm was a yes/no question asking 'Do you own a farm of 40 hectares or more (i.e., 100 acres or more)?'.

CSG on property asked those owning a farm about the status of Coal seam Gas (CSG) development on their property in relation to whether CSG leases existed or not. In 2016, **Satisfaction with dealings with CSG companies** (Q42_A) the **Number of wells** (Q42_B) were also asked.

Own or rent asked about the home residents lived in and whether they: own, rent or have some other arrangement.

Education asked about highest level of education completed and had four options: less than year 12 (or senior high school); completed year 12 (or senior high school) ; certificate, diploma, or trade qualification; or bachelor degree or higher qualification.

Australian born was a yes/no question. Note: only asked in 2014.

Indigenous Australian was also a yes/no question. Note: only asked in 2014

Appendix B Reliability of scale items

B.1 Summary of scale reliability for 2016 survey

Table 9: Measurement of community wellbeing and resilience dimensions

Measures	No of items	Scale type and reliability ¹	Examples for scale items
<u>Community Wellbeing</u>			
Personal safety	4	Agreement .83	safe to be alone at home, walk outside, or leave the car on the side of the road
Income sufficiency	3	Agreement .91	household income was enough for household expenses, and the lifestyle they enjoy
Health	6	Satisfaction .83	diet and eating habits, exercise habits, physical and mental health
Services and facilities	9	Satisfaction .90	With local schools, child care, sports and leisure facilities, food and other shopping, medical and health services, and community support services
Built environment	3	Satisfaction .89	with cleanliness in their town, parks and gardens, and the general appearance of their town
Roads	5	Satisfaction .83	with the condition, safety and amount of traffic on the roads, both in and around their town
Environmental quality	3	Satisfaction .71	with the level of dust, noise, and the overall quality of the general environment in their community
Environmental management	4	Satisfaction .88	with quality of underground water for the future; nature reserves for the future; sustainability of local farming land for the future
Decision making and citizen voice	4	Agreement .85	council keeps them informed; there are opportunities to be heard; and the unconventional gas companies involved local residents in their decisions
Employment and business opportunities	3	Agreement .86	good job opportunities, local businesses had done well out of unconventional gas development
Community spirit	4	Agreement .91	people can rely upon one another for help; have friendly relationships; can work together if there is a serious problem
Community cohesion	3	Agreement .89	local community was welcoming of newcomers and people of different cultures; and their community includes everyone
Community trust	6	Agreement .86	levels of trust in community leaders; people generally around their local area; local Council; unconventional gas companies; and State Government;
Community participation	4	Agreement .89	they regularly helped out a local group as a volunteer; attended several community events in the past year; were an active member of a local organisation or club
Social interaction	4	Agreement .79	they regularly visited someone's home; went out together socially; spoke or texted on the phone
<u>Community resilience</u>			

Community resilience actions	8	Agreement .92	planning for the future, adequate leadership, accessing relevant information, developing key connections within the community, supporting volunteers, persevering
Collective efficacy across stakeholders	2	Agreement .83	different groups (residents, government, business and resource companies) could work together to address problems; and take advantage of opportunities in relation to unconventional gas development

Notes: ¹ Reliability = the Spearman-Brown Rho correlation for two-item measures and Cronbach's alpha for other measures

B.2 Comparison of scale reliability 2014 and 2016

Table 10 details the reliability scores for each community wellbeing measure in 2014 and 2016. The reliability measures only used the Western Downs sample in 2016 for comparison purposes (i.e., excluding the Roma subregion). Each measure's reliability was the about the same or higher in 2016, except for environmental quality suggesting that this measure could be improved with more items.

Table 10 Reliability of measures in 2014 and 2016

Measures	No of items	Reliability ¹	
		2014	2016 ²
Dimensions			
1. Personal safety	4	.77	.83
2. Income sufficiency	3	.91	.91
3. Health	6	.81	.83
4. Services and facilities	9	.87	.90
5. Built environment	3	.82	.89
6. Roads	5	.83	.83
7. Environmental quality	3	.79	.71
8. Environmental management	4	.85	.88
9. Decision making and citizen voice	4	.82	.85
10. Employment and business opportunities	3	.84	.86
11. Community spirit	4	.89	.91
12. Community cohesion	3	.88	.89
13. Community trust	6	.84	.86
14. Community participation	4	.89	.89
15. Social interaction	4	.79	.79
Overall community wellbeing	5	.86	.85
Expected future wellbeing	2	.86	.93
Expected change in future wellbeing	1	NA	NA
Place attachment	4 ²	.84	.84

Note: ¹ Reliability was measured using Cronbach's alpha, except for expected future wellbeing which only had two items. It's reliability was measured using the Spearman-Brown Rho correlation. ² This measure had 4 items in the 2014, though one item was dropped in the 2016 survey (see measure description below).

B.3 Community Resilience Measures

Community resilience was measured in three ways: 1) *community actions*, which used eight items to measure perceptions of various community activities in response to changes from CSG development; 2) *collective efficacy*, which used two items to measure a belief in the community's ability to work together; and 3) an overall evaluation of the level of *community adaptation* in dealing with change from CSG development, measured by a single item. Table 11 summarises reliability scores and scale development.

Table 11 Measurement of community resilience

Measures	No. of items	Reliability ¹	
		2014	2016 ²
Community actions (responding to change)	8	.92	.92
Community efficacy	2	.90	.90
Overall community resilience ²	10	.93	.93
Level of community adaptation	1	NA	NA

Note: ¹ Cronbach's alpha was used to measure the reliability for community actions and the Spearman-Brown Rho correlation was used for community efficacy since it only had two items; ² Overall community resilience combines community actions and community efficacy.

B.4 Community Acceptance Measures: Attitudes and Feelings towards CSG development

Attitude towards coal seam gas was measured using a single item measure, and feelings towards coal seam gas was captured using 6 items – three items measured positive emotions and three items measured negative emotions. The attitude and feelings items demonstrated high internal consistency and were combined into a scale called community attitude and feelings towards CSG (see Table 12).

Table 12 Measurement of community acceptance

Measures	No of items	Reliability	
		2014	2016
Attitude towards CSG development	1	NA	NA
Feelings towards CSG development	6	.90	.90
Attitude and feelings towards CSG ¹	7	.92	.91

Note: ¹ Scale constructed from average of attitude and feelings items

Appendix C Statistical analyses

C.1 Underlying drivers of community wellbeing

Multiple regression analyses were undertaken to help determine which dimensions were the most important. These analyses predicted satisfaction with overall community wellbeing very well, explaining 54 percent of overall community wellbeing in 2014 and 58 percent in 2016 (adjusted $R^2 = .54$ and $.58$ respectively). Beta coefficients indicate the importance of each dimension in contributing to overall community wellbeing, these are shown in Table 13.

Table 13 Explaining overall community wellbeing from wellbeing dimensions: Multiple regression analysis

Community wellbeing dimension	2014	2016
	Beta	Beta
Services and facilities	0.25***	0.37***
Social interaction	0.14*	0.18**
Personal safety	0.10*	0.16**
Community spirit	0.23**	0.16**
Employment and business opportunities	0.01	0.11**
Community cohesion	0.19**	0.08
Decision making and citizen voice	0.01	-0.08
Environmental quality	0.09	0.07
Built environment	0.08	0.07
Environmental management	0.00	0.04
Community trust	-0.07	-0.04
Community participation	0.08	0.03
Roads	0.04	0.02
Income sufficiency	0.03	0.00
Health	0.01	0.00

Notes: Beta is the standardised coefficient, it is scale free and used to compare predictors; bold face indicates the most important dimensions for community wellbeing in 2016 ($p < .05$); Significance: $p < .05 = *$, $p < .01 = **$, $p < .001 = ***$.

C.2 Describing community functioning

A discriminant analysis was conducted to understand which community resilience action items and dimensions of community wellbeing are most important in explaining the way communities in the Western Downs are adapting (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 in the 2016, which was called 'community

functioning’. This function was similar to the main function identified in 2014, which was also named ‘community functioning’. However, the 2016 analysis included more detail by including each community resilience action item separately rather than an average measure for overall community resilience actions in 2014.

Table 14 shows the correlations of various community resilience actions and dimensions of community wellbeing with community functioning. The community resilience items are moderately correlated with community functioning (.30 or over), except for “Good working relationships exist among different community groups” and ‘The community shares resources, information, and learnings’. It seems good working relationships between local residents, government, business and resource companies are more important for community functioning than those among between different community groups. It also seems that the community being able to ‘access relevant information to deal with change effectively’ is more important than the ‘sharing of resources, information and learnings’ for community functioning. The community wellbeing dimensions correlated with community functioning are decision making and citizen voice, community trust, environmental management, and employment and business opportunities (all over .30).

Table 14 Correlations of community resilience actions and dimensions of community wellbeing with Community functioning, 2016

Community functioning Correlation	Community resilience actions and dimensions of community wellbeing
	<u>Community resilience actions</u>
0.65	There is good planning for the future for this town and surrounds
0.65	Local residents, government, business and resource companies: All these groups can work together to address <i>problems</i> associated with CSG development
0.64	Local residents, government, business and resource companies: All these groups can work together to take advantage of the <i>opportunities</i> associated with CSG development
0.64	There is adequate leadership within the community to deal with the changes
0.64	The community can access relevant information to deal with change effectively
0.60	The community is able to support its volunteers over the long term
0.56	The community can persevere to find solutions for its problems
0.44	The community gets involved in responding to changes
0.38	There are key people in our community who know the right people to help us get things done.
0.22	Good working relationships exist among different community groups
0.19	The community shares resources, information, and learnings
	<u>Community wellbeing dimensions</u>
0.57	Decision making and citizen voice
0.53	Community trust
0.52	Environmental management
0.48	Employment and business opportunities
0.25	Income sufficiency
0.25	Built environment
0.24	Services and facilities
0.24	Environmental quality
0.24	Community spirit
0.17	Health
0.14	Community cohesion
0.13	Social interaction
0.09	Personal safety
0.09	Roads
0.03	Community participation

Note: correlations over .30 are bolded

C.3 Important drivers of attitudes and feelings towards CSG

A multiple regression was undertaken to determine significant predictors of community attitude and feelings towards CSG activities in the region. Various items were selected which directly related to CSG activities, and these used as potential predictors of overall attitude and feelings towards CSG (see Table 15). These items explained over half the variation in attitude and feelings towards CSG (adjusted $R^2 = .56$), though unlike 2014, local businesses doing well out of CSG development was not significant. Significant predictors are shown with bolded Beta coefficients which reflect the relative importance of each predictor.

Table 15 Explaining attitudes and feelings towards CSG, 2016: Multiple regression analysis

Predictors of attitudes and feelings towards CSG	Beta	Mean
Coal Seam Gas companies in your local area can be trusted	0.34***	2.41
[Local area name] and surrounds is adapting to CSG activities	0.29***	3.06
Coal seam gas companies involve local residents in their decisions	0.17**	2.27
Managing the quality of underground water for the future	0.11*	2.51
Local businesses are doing well out of CSG development	0.01	2.17

Notes: Beta is the standardised coefficient, it is scale free and used to compare predictors; bold face indicates the most important dimensions for predicting attitudes and feelings towards CSG in 2016 ($p < .05$); Significance level: $p < .05 = *$, $p < .01 = **$, $p < .001 = ***$.

C.4 Predictors of expected future community wellbeing

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 (55.6%). Present community wellbeing, place attachment, and community resilience were all significant predictors in 2016, as they were in 2014. However attitude and feelings toward CSG was not significant in 2016.

Table 16 Explaining expected future community wellbeing: Multiple regression analysis, 2016

	Beta
Community wellbeing	0.42***
Place attachment	0.26***
Community resilience	0.21***
Attitudes and feelings towards CSG	0.06

Notes: Beta is the standardised coefficient, it is scale free and used to compare predictors; bold face indicates the most important dimensions for predicting expected future community wellbeing ($p < .05$); Significance level: $p < .05 = *$, $p < .01 = **$, $p < .001 = ***$.

Appendix D Comparison with LGAQ survey

D.1 Comparative items in CSIRO and LGAQ survey

Table 17 Wording for comparative community wellbeing items in LGAQ and CSIRO surveys

Survey	Question stem	Question	Response scale
CSIRO	Thinking about overall community wellbeing in [name of town] and surrounds, how much do you agree that:	This community is suitable for young children This community is suitable for teenagers This community is suitable for seniors	1 = strongly disagree to 5 = strongly agree
LGAQ	How would you rate the suitability of your community for:	Young children Teenagers Seniors	1 = very unsatisfactory to 5 = very satisfactory

Note: CSIRO refers to this report; LGAQ survey refers to Morton and Edwards (2013)

D.2 Comparative results of community wellbeing: CSIRO surveys 2014 and 2016 with LGAQ survey 2013

Table 18 Comparing the WD Region with Queensland: Percentage of favourable responses for three wellbeing measures

	LGAQ survey in 2013			CSIRO survey in 2014 and 2016	
	Rural	SEQ	All Qld	WD region 2014	WD region 2016
Community is suitable for young children	63.40 % (N = 93)	54.40 %*** (N = 239)	56.50 %*** (N = 468)	70.20 % (N = 396)	72.82% (390)
Community is suitable for teenagers	27.20 %** (N = 92)	40.50 % (N = 240)	31.60 %*** (N = 468)	43.50 % (N = 395)	46.06% (N=393+)
Community is suitable for seniors	54.50 %** (N = 99)	60.80 %** (N = 243)	57.10 %*** (N = 490)	70.00 % (N = 397)	76.14% (N=394)

Note: Favourable responses are scores of 4 or 5

Appendix E Results for survey items by subregion

This Appendix shows all survey items in 2016 by subregion. Appendix E.1 shows the means for the Western Down region and its subregions, as well as the adjoining subregion of Roma for comparison. Appendix E.2 shows survey items with significant differences between 2014 and 2016. Each item is measured on a 5 point scale from 1 to 5 where 3 is the mid-point, and higher numbers reflect more agreement or satisfaction with an item. The items are preceded by the question stem and are organised in different sections relating to measures of community wellbeing; community resilience and adaptation; community acceptance; and expected future community wellbeing. See Table 19 for a description of each measure.

E.1 All survey items for 2016 by subregion

Table 19 Results of Survey by item

		WD region		Subregions (including Roma)			
	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
COMMUNITY WELLBEING							
<i>Personal safety—Now a few questions about personal safety. On a scale from 1 to 5, how much do you agree that:</i>							
It is safe to be alone at home during the night	400	4.27	4.25	3.83	4.55	4.45	4.69
It is safe to walk alone outside at night	398	3.87	3.47	3.49	4.35	4.19	4.14
It is safe to leave the car on the side of the road at night	392	3.03	2.94	2.80	3.51	2.87	3.58
Overall, I feel safe living in the area	400	4.19	4.10	3.85	4.51	4.30	4.66
<i>Income sufficiency—Thinking about your household income, how much do you agree that:</i>							
Your income is enough for household expenses	394	3.74	3.72	3.73	3.73	3.78	3.88
Your income is enough for the lifestyle you enjoy	398	3.57	3.60	3.51	3.57	3.60	3.70
Your rent or mortgage repayments impact greatly on your household finances	314	3.22	3.24	3.12	3.16	3.35	3.47
Overall, I am satisfied that my income covers living expenses	398	3.84	3.75	3.86	3.86	3.90	4.03
<i>Health—Thinking about your health and wellbeing, how satisfied are you with:</i>							
Your diet and eating habits	400	3.82	3.85	3.77	3.93	3.73	3.89
Your exercise habits	400	3.43	3.50	3.30	3.59	3.33	3.33
Your physical health	400	3.64	3.73	3.52	3.74	3.57	3.88
Your mental health	400	4.10	4.04	4.15	4.13	4.09	4.24
Your job security, if applicable	265	3.88	3.93	3.56	3.95	4.07	3.95
Your work-life balance	283	3.55	3.59	3.51	3.59	3.48	3.62
Overall, how satisfied are you with your health and wellbeing	400	3.87	3.87	3.81	4.02	3.79	4.04

	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
Services and facilities – Thinking of services and facilities for your local area, how satisfied are you with:							
Local schools	326	3.82	3.98	3.88	3.91	3.47	4.11
Child care facilities	264	3.45	3.79	3.47	3.58	2.92	3.91
Sports and leisure facilities	373	3.55	3.82	3.65	3.60	3.14	3.81
Cultural facilities	370	3.31	3.42	3.45	3.53	2.82	3.60
Shopping for food and everyday items	399	3.58	4.04	3.80	3.39	3.09	3.46
Other shopping (e.g., clothes and household goods)	398	2.70	3.19	2.86	2.28	2.46	2.89
Medical and health services	398	3.42	3.70	3.54	3.10	3.36	3.78
Community support services (e.g. meals on wheels, youth workers)	334	3.63	3.90	3.70	3.74	3.17	3.83
Overall, how satisfied are you with the services and facilities of [local area name]	398	3.54	3.76	3.70	3.36	3.31	3.67
Built environment – Thinking about [local area name]’s general appearance, how satisfied are you with the following:							
Cleanliness in the town	399	3.62	3.65	3.51	3.65	3.69	3.62
Greenery and Parks in the town	395	3.59	3.96	3.36	3.57	3.48	3.58
Overall, how satisfied are you with the general appearance of the town	398	3.60	3.84	3.48	3.52	3.56	3.59
Roads – Thinking about the roads outside of [local area name], how satisfied are you with the:							
Condition of the roads	397	2.46	2.46	2.49	2.71	2.16	2.69
Safety on the roads	398	2.78	2.73	2.72	3.08	2.59	3.16
Amount of traffic on roads	396	3.11	2.99	3.01	3.09	3.35	3.56
The roads overall	399	2.69	2.70	2.72	2.92	2.43	3.00
Environmental quality – Thinking about pollution in the general environment, how satisfied are you with the:							
Level of dust	395	3.47	3.49	3.54	3.49	3.33	3.64
Level of noise	396	3.99	3.89	3.86	3.96	4.26	4.04
Quality of the air	398	4.17	4.07	3.96	4.27	4.36	4.35
Overall quality of the general environment in [local area name]	398	3.92	3.99	3.74	4.04	3.90	3.97

	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
Environmental management – Now thinking about the <u>natural</u> environment around [local area name], how satisfied are you with the management of the:							
Quality of underground water for the future	358	2.51	2.73	2.51	2.52	2.30	2.87
Nature reserves for the future	356	3.13	3.33	3.00	3.03	3.16	3.26
Sustainability of local farming land for the future	389	3.03	3.17	2.78	2.90	3.27	3.23
The overall management of the natural environment for the future	382	3.01	3.12	2.82	3.03	3.09	3.26
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	395	2.62	2.68	2.53	2.56	2.69	2.93
There are opportunities for your voice to be heard on issues that are important to you	387	2.79	2.81	2.82	2.74	2.78	2.91
Coal seam gas companies involve local residents in their decisions	365	2.27	2.38	2.31	2.18	2.20	2.56
Overall, I am satisfied with how decisions are made that affect [local area name]	394	2.60	2.73	2.63	2.40	2.63	2.96
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	390	2.20	2.42	2.23	2.12	2.02	2.78
Local businesses are doing well out of CSG development	388	2.17	2.23	2.32	1.95	2.18	2.46
Overall, I am satisfied with employment and business opportunities in [local area name]	393	2.26	2.51	2.26	2.04	2.24	2.77
Community spirit – Thinking about community spirit in your local area, how much do you agree that:							
People can rely upon one another for help	399	3.79	3.80	3.88	3.79	3.71	4.00
People have friendly relationships	394	3.87	3.89	3.86	3.99	3.74	4.12
People can work together if there is a serious problem	396	4.14	4.12	4.10	4.12	4.21	4.44
Overall, I am satisfied with community spirit in the area	398	3.89	3.92	3.90	3.90	3.84	4.22
Community cohesion – Thinking about how inclusive the community is, how much do you agree that:							
Your community is welcoming of newcomers	394	3.52	3.38	3.59	3.62	3.47	3.96
Your local community is welcoming of people of different cultures	385	3.32	3.04	3.46	3.46	3.33	3.86
Overall, your community includes everyone no matter who they are	395	3.49	3.36	3.49	3.57	3.53	3.91

	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
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	393	3.29	3.18	3.29	3.38	3.31	3.68
People that you see around [local area name] can generally be trusted	396	3.42	3.43	3.51	3.64	3.09	3.76
Your local council can be trusted	389	3.00	3.01	3.01	2.96	3.01	3.25
Coal Seam Gas companies in your local area can be trusted	366	2.41	2.32	2.50	2.34	2.47	2.74
Overall, I am satisfied with levels of trust in my local area	398	3.19	3.18	3.14	3.21	3.24	3.51
State Government can be trusted	393	2.32	2.31	2.40	2.31	2.25	2.77
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)	394	3.01	2.81	2.84	3.33	3.04	3.12
You have attended several community events in the past year	397	3.51	3.36	3.57	3.73	3.39	3.69
You are a very active member of a local organisation or club	395	3.12	3.02	2.87	3.46	3.14	3.10
Overall, you participate regularly in a variety of community activities	398	3.16	3.05	3.04	3.44	3.11	3.29
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	399	3.20	3.27	3.32	3.25	2.96	3.36
Go out together socially	399	3.02	3.11	3.13	3.06	2.76	3.27
Speak or text on the phone	399	3.61	3.79	3.58	3.53	3.56	3.86
Overall, I am satisfied with the amount of my social interaction in the local area	398	3.80	3.87	3.85	3.86	3.64	4.00
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	390	3.92	4.15	3.91	3.96	3.65	4.17
This community is suitable for teenagers	393	3.30	3.56	3.35	3.29	2.98	3.55
This community is suitable for seniors	394	3.92	4.15	3.86	3.98	3.68	4.28
Overall, this local area offers a good quality of life	399	3.97	4.13	3.94	3.91	3.90	4.24
Overall, I am happy living in this local area	400	4.12	4.21	3.91	4.28	4.09	4.36
This community is a great place to live (item from Regional Wellbeing Survey)	399	4.09	4.13	3.95	4.25	4.03	4.34

	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
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	400	4.20	4.20	4.00	4.35	4.24	4.68
I am pleased to come back to the area, if I go away	396	4.19	4.26	3.93	4.45	4.11	4.48
Overall, I feel very attached to this local area	400	4.09	4.08	3.90	4.32	4.07	4.40

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 the future for this town and surrounds	364	2.70	2.84	2.57	2.63	2.76	3.04
There is adequate leadership within the community to deal with the changes	384	2.83	2.91	2.63	2.76	3.03	3.10
The community can access relevant information to deal with change effectively	380	2.95	3.10	2.82	2.80	3.09	3.35
Overall, the community is responding strategically to CSG activities	373	2.79	2.85	2.72	2.74	2.86	3.12
Good working relationships exist among different community groups	380	3.48	3.61	3.32	3.49	3.49	3.87
The community shares resources, information, and learnings	379	3.35	3.45	3.21	3.42	3.32	3.69
There are key people in our community who know the right people to help us get things done	381	3.44	3.57	3.25	3.56	3.36	3.69
Overall, the community is working together in responding to CSG activities	377	3.12	3.15	3.03	3.19	3.10	3.44
The community can persevere to find solutions for its problems	388	3.25	3.32	3.19	3.23	3.25	3.70
The community is able to support its volunteers over the long term	380	3.33	3.45	3.29	3.21	3.37	3.82
The community gets involved in responding to changes	387	3.26	3.46	3.24	3.19	3.16	3.71
Overall, the community is committed to their local area's future	394	3.70	3.81	3.65	3.76	3.60	4.01
Overall, I am satisfied with the way the community is responding to the changes	390	3.37	3.49	3.32	3.28	3.38	3.76

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	387	3.07	3.16	2.99	2.93	3.21	3.23
All these groups can work together to take advantage of the opportunities associated with CSG development	386	3.14	3.24	3.06	2.95	3.32	3.46

	No.	WD region	Dalby	Chinchilla	Miles	Tara	Roma
Level of community adaptation – Which of the following best describes how [local area name] and surrounds is dealing with the CSG activities?							
1 = resisting / 2 = not coping / 3 = only just coping / 4 = adapting to the changes / 5 = changing into something different but better	381	3.34	3.38	3.47	3.25	3.26	3.73
Community coping – How much do you agree that [local area name] and surrounds							
is coping with CSG activities	388	2.99	3.04	3.04	2.77	3.11	3.28
is adapting to CSG activities	381	3.06	3.04	3.21	2.83	3.13	3.33
is coping with the drought	385	2.88	3.04	3.13	2.79	2.55	2.95
cope pretty well when faced with challenges (item from Regional Wellbeing Survey)	395	3.58	3.66	3.74	3.40	3.53	3.81
COMMUNITY ACCEPTANCE							
Feelings toward CSG development – On a scale of 1-5, how much do you agree with the following							
I feel pleased to have the coal seam gas industry in our region	395	2.78	2.87	2.86	2.60	2.79	3.18
When I look at what is happening around coal seam gas I feel optimistic	392	2.58	2.61	2.72	2.43	2.54	2.99
When I think about the opportunities of coal seam gas I can get very excited	391	2.29	2.37	2.44	2.17	2.18	2.52
When I think about how much coal seam gas affects everyday life, it makes me angry	393	2.72	2.70	2.70	2.97	2.53	2.76
When I think about how things are changing because of coal seam gas I get worried	389	3.10	3.14	3.01	3.43	2.80	3.08
When I think about coal seam gas I feel sad	391	2.81	2.83	2.65	3.10	2.66	2.59
Attitude to CSG – Which of the following best describes your attitude to coal seam gas in this region:							
1 = I reject it / 2 = I tolerate it / 3 = I accept it / 4 = I approve of it / 5 = I embrace it	395	2.67	2.57	2.77	2.58	2.75	2.95
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	396	3.71	3.84	3.60	3.62	3.78	4.03
Overall, this local area will offer a good quality of life	396	3.67	3.79	3.60	3.53	3.77	4.02
This community has a bright future (additional item from Regional Wellbeing Survey)	397	3.32	3.50	3.31	3.15	3.31	3.89
Over the next 3 years, do you think community wellbeing will:							
1 = Decline, 2 = Stay about the same, and 3 = Improve. Note: this is a 3 point scale	387	1.85	1.95	1.70	1.77	1.97	2.04

E.2 Survey items by subregion - significant differences between years

Table 20 Mean scores for 2016 items that are significantly different from 2014 by subregion

	<u>Dalby</u>		<u>Chinchilla</u>		<u>Miles</u>		<u>Tara</u>		<u>WD region</u>	
	2014	2016	2014	2016	2014	2016	2014	2016	2014	2016
COMMUNITY WELLBEING										
<i>Personal safety—Now a few questions about personal safety. On a scale from 1 to 5, how much do you agree that:</i>										
It is safe to be alone at home during the night	4.31	4.25	4.41 ^H	3.83 ^L	4.40	4.55	4.21	4.45	4.33	4.27
Overall, I feel safe living in the area	4.28	4.10	4.43 ^H	3.85 ^L	4.40	4.51	4.14	4.30	4.31	4.19
<i>Health—Thinking about your health and wellbeing, how satisfied are you with:</i>										
Your physical health	3.79	3.73	3.91 ^H	3.52 ^L	3.77	3.74	3.56	3.57	3.76	3.64
<i>Services and facilities—Thinking of services and facilities for your local area, how satisfied are you with:</i>										
Medical and health services	3.46	3.70	3.15	3.54	2.84	3.10	2.79 ^L	3.36 ^H	3.06 ^L	3.42 ^H
<i>Roads—Thinking about the roads outside of [local area name], how satisfied are you with the:</i>										
Condition of the roads	2.52	2.46	2.21	2.49	2.30 ^L	2.71 ^H	1.94	2.16	2.24 ^L	2.46 ^H
Safety on the roads	2.59	2.73	2.24 ^L	2.72 ^H	2.26 ^L	3.08 ^H	2.23	2.59	2.33 ^L	2.78 ^H
Amount of traffic on roads	2.64	2.99	2.14 ^L	3.01 ^H	1.93 ^L	3.09 ^H	2.92 ^L	3.35 ^H	2.41 ^L	3.11 ^H
The roads overall	2.59	2.70	2.37	2.72	2.28 ^L	2.92 ^H	2.32	2.43	2.39 ^L	2.69 ^H
<i>Environmental quality—Thinking about pollution in the general environment, how satisfied are you with the:</i>										
Level of dust	3.20	3.49	3.36	3.54	2.97 ^L	3.49 ^H	3.00	3.33	3.13 ^L	3.47 ^H
Level of noise	3.82	3.89	3.62	3.86	3.33 ^L	3.96 ^H	4.11	4.26	3.72 ^L	3.99 ^H
Overall quality of the general environment in [local area name]	3.66 ^L	4.07 ^H	3.65	3.96	3.41 ^L	4.27 ^H	3.72 ^L	4.36 ^H	3.61 ^L	4.17 ^H
<i>Environmental management—Now thinking about the <u>natural</u> environment around [local area name], how satisfied are you with the management of the:</i>										
Sustainability of local farming land for the future	2.97	3.17	2.82	2.78	2.41 ^L	2.90 ^H	2.79 ^L	3.27 ^H	2.75 ^L	3.03 ^H
<i>Employment and business opportunities—Regarding employment and business opportunities in the local area of [local area name], how much do you agree that:</i>										
There are good job opportunities	2.85 ^H	2.42 ^L	3.81 ^H	2.23 ^L	3.19 ^H	2.12 ^L	2.63 ^H	2.02 ^L	3.12 ^H	2.20 ^L
Local business have done well out of CSG development	3.01 ^H	2.23 ^L	3.45 ^H	2.32 ^L	2.92 ^H	1.95 ^L	2.96 ^H	2.18 ^L	3.08 ^H	2.17 ^L
Overall, I am satisfied with employment and business opportunities in [local area name]	2.99 ^H	2.51 ^L	3.69 ^H	2.26 ^L	2.92 ^H	2.04 ^L	2.69 ^H	2.24 ^L	3.07 ^H	2.26 ^L
<i>Community cohesion—Thinking about how inclusive the community is, how much do you agree that:</i>										
Your local community is welcoming of people of different cultures	3.44 ^H	3.04 ^L	3.84 ^H	3.46 ^L	3.55	3.46	3.33	3.33	3.54 ^H	3.32 ^L
Overall, your community includes everyone no matter who they are	3.55	3.36	3.84 ^H	3.49 ^L	3.73	3.57	3.45	3.53	3.64	3.49
<i>Community trust—Thinking about levels of trust in your local area, how much do you agree that:</i>										
Community trust -State Government can be trusted	2.62	2.31	2.67	2.40	2.66 ^H	2.31 ^L	2.43	2.25	2.60 ^H	2.32 ^L

	<u>Dalby</u>		<u>Chinchilla</u>		<u>Miles</u>		<u>Tara</u>		<u>WD region</u>	
	2014	2016	2014	2016	2014	2016	2014	2016	2014	2016

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 are key people in our community who know the right people to help us get things done

3.14 ^L	3.57 ^H	3.21	3.25	3.18	3.56	3.27	3.36	3.20 ^L	3.44 ^H
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Good working relationships exist among different community groups

3.64	3.61	3.89 ^H	3.32 ^L	3.56	3.49	3.69	3.49	3.69 ^H	3.48 ^L
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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 take advantage of the opportunities

associated with CSG development	3.17	3.24	3.42 ^H	3.06 ^L	3.13	2.95	3.17	3.32	3.23	3.14
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COMMUNITY ACCEPTANCE

Feelings toward CSG development – On a scale of 1-5, how much do you agree with the following

When I look at what is happening around coal seam gas I feel optimistic

2.74	2.61	3.07	2.72	2.67	2.43	2.76	2.54	2.81 ^H	2.58 ^L
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When I think about the opportunities

of coal seam gas I can get very excited	2.45	2.37	2.72	2.44	2.50	2.17	2.44	2.18	2.53 ^H	2.29 ^L
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Notes: Bolded 2016 survey items significantly different from 2014 ($p < .01$). At $p < .01$ we can expect one significant item from each subregion to have occurred by chance since nearly 100 survey items were tested.

Appendix F Tables of demographic differences

F.1 Subregions

Table 21 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by subregion, 2016

Community wellbeing dimensions	WD Region	Subregions				Roma
		Dalby	Chinchilla	Miles	Tara	
Community spirit	3.92	3.93	3.93	3.94	3.87	4.20^{WD}
Environmental quality	3.88	3.82	3.78	3.91	4.01	4.02
Personal safety	3.85	3.70^L	3.51^L	4.23^H	3.97	4.28^{WD}
Health	3.75	3.78	3.70	3.84	3.67	3.85
Income sufficiency	3.72	3.68	3.70	3.72	3.77	3.87
Built environment	3.60	3.82^H	3.45^L	3.58	3.57	3.60
Community cohesion	3.45	3.26	3.52	3.56	3.45	3.91^{WD}
Services and facilities	3.42	3.72^H	3.55^H	3.37^H	3.06^L	3.65^{WD}
Social interaction	3.40	3.51	3.47	3.42	3.21	3.62^{WD}
Community participation	3.20	3.06	3.08	3.49	3.17	3.28
Community trust	2.96	2.92	3.00	2.98	2.94	3.29^{WD}
Environmental management	2.95	3.11	2.79	2.87	3.01	3.14
Roads	2.76	2.72	2.73	2.95	2.64	3.09^{WD}
Decision making and citizen voice	2.59	2.66	2.59	2.50	2.63	2.84^{WD}
Employment and business opportunities	2.22	2.39^H	2.28	2.04^L	2.15	2.66^{WD}
Overall Community wellbeing	3.84	4.03^H	3.79	3.88	3.67^L	4.12^{WD}
Overall Community resilience	3.15	3.26	3.05	3.07	3.21	3.49^{WD}
Expected future Community wellbeing	3.69	3.82	3.60	3.58	3.76	4.02^{WD}
Place attachment	4.16	4.18	3.95^L	4.37^H	4.14	4.52^{WD}
Community attitudes and feelings towards CSG	2.80	2.81	2.92	2.59	2.90	3.04^{WD}

Note: ^{WD} indicates significantly higher scores than the Western Downs overall score; ^H denotes significantly higher than ^L in that row; ^L denotes significantly lower than ^H in that row

F.2 Place of residence: in-town and out-of-town

Table 22 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by place of residence, 2016

Community wellbeing dimensions	WD Region	Location of residence	
		Out of town	In town
Community spirit	3.92	3.85	3.99
Environmental quality	3.88	3.96^H	3.79^L
Personal safety	3.85	3.96^H	3.73^L
Health	3.75	3.75	3.74
Income sufficiency	3.72	3.71	3.72
Built environment	3.60	3.55	3.66
Community cohesion	3.45	3.41	3.49
Services and facilities	3.42	3.23^L	3.63^H
Social interaction	3.40	3.34	3.46
Community participation	3.20	3.30	3.10
Community trust	2.96	2.85^L	3.07^H
Environmental management	2.95	2.87	3.02
Roads	2.76	2.67	2.85
Decision making and citizen voice	2.59	2.55	2.64
Employment and business opportunities	2.22	2.13^L	2.31^H
Overall Community wellbeing	3.84	3.76^L	3.93^H
Overall Community resilience	3.15	3.05^L	3.25^H
Expected future wellbeing	3.69	3.69	3.69
Place attachment	4.16	4.15	4.18
Community attitudes and feelings towards CSG	2.80	2.66^L	2.96^H

Note: Bold font indicates significant differences in mean scores; ^H denotes significantly higher than ^L; ^L denotes significantly lower than ^H

F.3 Age

Table 23 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by age, 2016

Community wellbeing dimensions	WD region	Age brackets		
		Younger < 35 years	Middle 35 - 54 years	Older > 55 years
Community spirit	3.92	3.82	3.90	3.97
Environmental quality	3.88	3.77	3.86	3.93
Personal safety	3.85	3.58^L	3.92^H	3.88
Health	3.75	3.77	3.64	3.84
Income sufficiency	3.72	3.82	3.63	3.76
Built environment	3.60	3.46	3.59	3.67
Community cohesion	3.45	3.38	3.45	3.47
Services and facilities	3.42	3.29^L	3.31	3.58^H
Social interaction	3.40	3.62^H	3.47	3.26^L
Community participation	3.20	3.26	3.31	3.07
Community trust	2.96	2.95	2.85^L	3.07^H
Environmental management	2.95	2.89	2.89	3.02
Roads	2.76	2.56^L	2.60^L	2.99^H
Decision making and citizen voice	2.59	2.64	2.52	2.65
Employment and business opportunities	2.22	2.27	2.16	2.25
Overall Community wellbeing	3.84	3.70	3.80	3.94
Overall Community resilience	3.15	3.22	3.02^L	3.25^H
Expected future Community wellbeing	3.69	3.41^L	3.61	3.87^H
Place attachment	4.16	3.91^L	4.12	4.30^H
Community attitudes and feelings towards CSG	2.80	2.82	2.79	2.81

Note: Bold font indicates significant differences in mean scores; ^H denotes significantly higher than ^L; ^L denotes significantly lower than ^H

F.4 Gender

Table 24 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by gender, 2016

Community wellbeing dimensions	WD Region	Gender	
		Male	Female
Community spirit	3.92	3.86	3.97
Environmental quality	3.88	3.94	3.83
Personal safety	3.85	3.95	3.76
Health	3.75	3.70	3.78
Income sufficiency	3.72	3.66	3.76
Built environment	3.60	3.64	3.57
Community cohesion	3.45	3.39	3.49
Services and facilities	3.42	3.47	3.38
Social interaction	3.40	3.25^L	3.53^H
Community participation	3.20	3.10	3.29
Community trust	2.96	2.91	3.00
Environmental management	2.95	3.06^H	2.84^L
Roads	2.76	2.85	2.68
Decision making and citizen voice	2.59	2.59	2.60
Employment and business opportunities	2.22	2.24	2.19
Overall Community wellbeing	3.84	3.84	3.85
Overall Community resilience	3.15	3.09	3.20
Expected future wellbeing	3.69	3.67	3.70
Place attachment	4.16	4.19	4.13
Community attitudes and feelings towards CSG	2.80	2.83	2.78

Note: Bold font indicates significant differences in mean scores; ^H denotes significantly higher than ^L; ^L denotes significantly lower than ^H

F.5 Income

Table 25 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by age by income brackets, 2016

Community wellbeing dimensions	WD Region	Income brackets			
		< \$40,00	\$40,000 - \$80,000	\$80,000 - \$120,000	> \$120,000
Community spirit	3.92	3.93	3.89	3.95	3.91
Environmental quality	3.88	3.82	3.75	3.99	4.05
Personal safety	3.85	3.72	3.73	4.12	4.16
Health	3.75	3.71	3.67	3.75	3.90
Income sufficiency	3.72	3.52^L	3.60^L	3.88	4.07^H
Built environment	3.60	3.73	3.54	3.73	3.43
Community cohesion	3.45	3.46	3.38	3.60	3.45
Services and facilities	3.42	3.58^H	3.28^L	3.46	3.48
Social interaction	3.40	3.19^L	3.42	3.67^H	3.63^H
Community participation	3.20	2.93^L	3.18	3.57^H	3.51^H
Community trust	2.96	2.92	2.88	3.04	2.99
Environmental management	2.95	2.91	2.81	3.07	3.12
Roads	2.76	2.95^H	2.70	2.79	2.47^L
Decision making and citizen voice	2.59	2.59	2.47	2.67	2.55
Employment and business opportunities	2.22	2.32	2.12	2.32	2.06
Overall Community wellbeing	3.84	3.91	3.76	3.96	3.85
Overall Community resilience	3.15	3.23	3.03	3.13	3.07
Expected future Community wellbeing	3.69	3.74	3.62	3.73	3.73
Place attachment	4.16	4.16	4.16	4.27	4.02
Community attitudes and feelings towards CSG	2.80	2.70	2.62^L	2.98	3.15^H

Note: Bold font indicates significant differences in mean scores; ^Hdenotes significantly higher than ^L; ^Ldenotes significantly lower than ^H

F.6 Newness to the community

Table 26 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by newness to the community, 2016

Community wellbeing dimensions	WD region	Years living in the community		
		5 yrs or less	6 - 10 yrs	> 10 yrs
Community spirit	3.92	3.94	3.64^L	3.97^H
Environmental quality	3.88	3.77	3.69	3.93
Personal safety	3.85	3.73	3.60	3.91
Health	3.75	3.73	3.69	3.76
Income sufficiency	3.72	3.63	3.67	3.73
Built environment	3.60	3.75	3.53	3.60
Community cohesion	3.45	3.51	3.32	3.46
Services and facilities	3.42	3.33	3.08^L	3.50^H
Social interaction	3.40	3.12	3.48	3.42
Community participation	3.20	2.92	3.16	3.24
Community trust	2.96	3.02	2.81	2.98
Environmental management	2.95	3.05	2.85	2.95
Roads	2.76	2.70	2.35^L	2.84^H
Decision making and citizen voice	2.59	2.78	2.36	2.62
Employment and business opportunities	2.22	2.40	2.03	2.23
Overall Community wellbeing	3.84	3.56^L	3.60^L	3.92^H
Overall Community resilience	3.15	3.27	2.94	3.18
Expected future community wellbeing	3.69	3.55	3.40^L	3.76^H
Place attachment	4.16	3.51^L	3.65^L	4.33^H
Community attitudes and feelings towards CSG	2.80	3.03	2.90	2.76

Note: Bold font indicates significant differences in mean scores; ^H denotes significantly higher than ^L; ^L denotes significantly lower than ^H

F.7 Owning a farm or not

Table 27 Mean scores for community wellbeing, resilience, future wellbeing, place attachment, and attitudes and feelings by farm ownership, 2016

Community wellbeing dimensions	WD Region	Farm ownership	
		No	Yes
Community spirit	3.92	3.91	3.93
Environmental quality	3.88	3.79^L	4.06^H
Personal safety	3.85	3.73^L	4.10^H
Health	3.75	3.67^L	3.89^H
Income sufficiency	3.72	3.66	3.82
Built environment	3.60	3.64	3.54
Community cohesion	3.45	3.43	3.46
Services and facilities	3.42	3.49^H	3.30^L
Social interaction	3.40	3.44	3.32
Community participation	3.20	3.09^L	3.42^H
Community trust	2.96	3.00	2.88
Environmental management	2.95	2.92	2.98
Roads	2.76	2.74	2.79
Decision making and citizen voice	2.59	2.57	2.64
Employment and business opportunities	2.22	2.25	2.14
Overall Community wellbeing	3.84	3.82	3.90
Overall Community resilience	3.15	3.22^H	3.02^L
Expected future wellbeing	3.69	3.63	3.81
Place attachment	4.16	4.13	4.24
Community attitudes and feelings towards CSG	2.80	2.89^H	2.64^L

Note: Bold font indicates significant differences in mean scores; ^H denotes significantly higher than ^L; ^L denotes significantly lower than ^H

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