

# Project Order, Variations and Research Progress

Project Title: Trends in community wellbeing and attitudes to CSG development - Survey 3

This document contains three sections. Click on the relevant section for more information.

- Section 1: <u>Research Project Order as approved by the GISERA Research</u> <u>Advisory Committee and GISERA Management Committee</u> <u>before project commencement</u>
- Section 2: Variations to Project Order
- Section 3: <u>Progress against project milestones</u>













# **1 Original Project Order**













# **Project Order**

Proforma 2017

#### 1. Short Project Title (less than 15 words)

Trends in community wellbeing and attitudes to CSG development - Survey 3					
Long Project Title	Trends in community wellbeing and attitudes to CSG development: Comparisons across time, regions and industry phases in south west Queensland				
GISERA Project Number	S.10				
Proposed Start Date	1 February, 2018				
Proposed End Date	31 March, 2019				
Project Leader	Dr Rod McCrea				
2. GISERA Region	New South Wales Northern Territory				
South Australia	Western Australia Victoria				
3. GISERA Research Program    Water Research []   Biodiversity Research []	GHG Research ⊠ Social & Economic Research   Agricultural Land □ Health Research   Management Research □				

#### 4. Research Leader, Title and Organisation

Dr Rod McCrea, Social Scientist, Land & Water CSIRO	
Commitment 70 days (over 14 months)	

#### 5. Background

Mitigating the social impact of unconventional gas development on host communities is a primary concern for government, industry, and local communities. These impacts vary considerably depending on the stage of the industry cycle, such as during the busy construction phase and the relative economic slowdown of post-construction (Rifkin, Uhlmann, Everingham, &

May, 2014; Towler et al., 2016; Walton, McCrea, & Leonard, 2016; Walton, Williams, & Leonard, 2017). Understanding these effects and changes needs a longitudinal approach to track impacts over time. This project builds on previous GISERA social research studies and continues to monitor community wellbeing (CWB) as the region experiences another industry phase in Qld – the operations phase.

The Western Downs region experienced considerable change between 2014, at the peak of construction, and 2016 when there was a widespread economic slowdown at the end of the construction phase (Centre for Coal Seam Gas, 2016; Fleming, Measham, Graham, & Cai, 2016) (Queensland Government Statician's Office, 2015). During this time, our previous research showed some aspects of CWB changed significantly and social acceptance of CSG development declined, even though there was little change in overall wellbeing across the region (Walton et al., 2016). This project continues to monitor community wellbeing by undertaking a third round of research to better understand how and why levels of community wellbeing, resilience, and attitudes to CSG change over the industry cycle by comparing previous results to a more stable operations phase in 2018. To do this, we propose repeating the CSIRO Survey of Community Wellbeing and Responding to Change in 2018 in the Western Downs and Eastern Maranoa regions, comparing these findings to 2014 and 2016.

We propose using an expanded version of the 2014 and 2016 survey instrument, which was tested and validated in the Social Baseline Narrabri study in 2017 (Community wellbeing and local attitudes to coal seam gas development: Narrabri Shire) (Walton & McCrea, 2017). The expanded survey version includes additional items relating to social acceptance and its underlying drivers. The underlying drivers of social acceptance can be considered the determinants of the industry's social licence to operate. The research in Narrabri found these drivers were highly predictive of social acceptance in that Shire, explaining 83% of the variation in individual subjective attitudes toward CSG development and the sector. We propose to use these items to explore issues around social licence in the Qld context, where maintaining the ongoing social acceptance of the community is critical for the longevity of the industry. Because many aspects underpinning social acceptance relate specifically to land owners we would also ensure the 2018 Qld sample is supplemented with a targeted sample of residents with CSG wells on their property.

It is important for community, industry and government to understand how and why community wellbeing and attitudes to CSG vary between regions and phases of CSG activity for planning and approval purposes. This knowledge provides a clearer indication of what to expect over the longer term for communities facing CSG development. With a more comprehensive understanding of these dynamics across time and space, the debates, policy, and planning around CSG development can be more strategic and proactive.

#### 6. Project Description

Our project has two main aims:

- To monitor changes and trends in community wellbeing, resilience and attitudes to CSG development across different phases of industry operation in south west Queensland. More specifically, how these vary between the construction, post-construction, and operations phases of development.
- 2) To communicate key messages and lessons learned from the third phase of community wellbeing research in Qld, and to situate it within broader lessons learned from this program of community wellbeing research since 2012 in Qld and more recently in NSW.

By conducting a third survey in the Western Downs/Eastern Maranoa region, we can statistically test for any changes over time between 2014, 2016 and 2018 in south west Queensland. It is an opportunity to identify significant changes between the construction, post-construction, and operations phases of CSG development in Qld. Results will show if community wellbeing, resilience and attitudes to CSG development are more positive in the more stable operations phase of CSG development.

Also, by using the expanded wellbeing survey which includes the drivers of social acceptance, it allows us to gain a deeper understanding of the various aspects of Qld's social licence and what is needed to meet host community's ongoing expectations of the sector and ultimately to improve their acceptance of the industry.

Communicating our findings effectively to key community, industry, and government stakeholders is a key component of this project. Thus, time and resources have been set aside to develop effective communication products and to engage with these audiences.

#### Importance and necessity

The CSIRO surveys of community wellbeing and attitudes to CSG development are the only representative surveys of perceived community wellbeing and attitudes to CSG development conducted in the Western Downs and Eastern Maranoa regions. A third survey adds to this body of knowledge by measuring and modelling changes in perceived community wellbeing and attitudes to CSG to be monitored over time and across industry phases.

#### Why is it important or necessary to do this project?

Aim 1 – It is important to know when and why levels of community wellbeing and attitudes to CSG vary over time. In 2016, five of the community wellbeing dimensions had decreased since 2014, another five had improved, yet overall wellbeing had remained similar. It is beneficial to monitor any further changes so that downward trends can be identified and addressed and improvements understood and potentially maximised. Understanding these trends helps to direct scarce and valuable resources to appropriate areas for effectively strengthening community wellbeing within the region.

In addition, it is important to compare findings from previous surveys in periods of rapid change with the more stable operations phase of CSG production currently being experienced in south west Queensland to get a clearer understanding of how attitudes and expectations change over the industry cycle, and what is required to maintain social acceptance. In 2016, social acceptance towards CSG development had declined slightly. Between the construction and post-construction phases in the Western Downs region, there was a shift toward more negative attitudes towards CSG development with the largest change being an increase in those who said they 'reject it' (9% in 2014 to 13% in2016). These changes may be transient and reflect the type of change experienced in the post-construction phase of the industry or may be indicative of a longer term trend in attitudes towards the sector.

Aim 2 – By deepening our understanding about why these important outcomes vary between industry phases and different communities, and by communicating key messages and learnings effectively to community, industry and government stakeholders, this program of social research moves beyond monitoring and evaluating outcomes for communities. It also provides a sound basis for understanding and nuancing community, industry and government decision making, planning and policy making across differing community contexts and industry phases. For example:

- At a local level, data from the second CSIRO survey of community wellbeing and attitudes to CSG development have been used by local council officers to prioritise community based activities. It was also used by a not-for-profit organisations in justifying funding proposals.
- At a state government level, it has informed Qld Government stakeholder consultation, especially in shaping early and direct engagement with landholders. The survey results provide state and federal governments with an independent and trusted source of information for forming a balanced view about potential and ongoing gas projects, especially by showing a diversity of views that may not be represented through the media and other consultation processes.
- At an industry level, it has enabled community engagement and social performance staff to better communicate local area issues within their organisation. This helps the organisation to respond to and address issues and concerns of local communities.

More generally, Google analytics data for the GISERA website shows that the webpages hosting information about outputs from the community wellbeing projects were viewed approximately 600 times by more than 400 unique visitors in 2017.

#### How will you do it (method)?

We will use the same methodological approach as for the previous CSIRO community wellbeing surveys in Queensland, except that we will make minor changes to the sampling frame and use an updated survey instrument, as outlined below.

#### Sampling frame

The sample will be extended by 100 more participants to boost the number of participants with CSG wells on their properties and the number of participants from the Eastern Maranoa Shire around

Roma. Essentially, a random sample of 600 residents (400 in the Western Downs Shire and 200 in the eastern Maranoa Shire) will be contacted by telephone (using landline and mobile numbers) to participate in a 35-minute survey on community wellbeing and attitudes to CSG development. Even though this is a long survey with approximately 180 questions, the response rate in last Qld survey was pleasing at 45%. The sample in the eastern Maranoa shire is being boosted from 100 to 200 to improve the reliability of these estimates and their comparability with other regions.

The sample of residents with active CSG leases on their property will be supplemented compared to previous years with an aim of having 100 farmers CSG wells in the sample. In 2016 only 32 farmers were included using the random sampling technique. However, in 2018 properties with CSG wells would be identified using state government data and GIS technology, and their corresponding addresses matched with another database of phone numbers, to ensure additional farmers with CSG wells are surveyed in 2018. This is important for identifying particular social licence issues for this segment of the population and for comparing their responses with farmers who do not have active CSG leases on their properties.

#### Survey instrument

This and the previous CSIRO surveys of community wellbeing and attitudes to CSG were developed based on a literature review of previous research in the fields of community wellbeing (e.g., Christakopoulou, Dawson, & Gari, 2001; Forjaz et al., 2011; McCrea, Walton, & Leonard, 2014, 2016; Morton & Edwards, 2013; Onyx & Leonard, 2010; Sirgy, Widgery, Lee, & Yu, 2010; Walton, McCrea, Leonard, & Williams, 2013), community resilience and adaptation (e.g., Berkes & Ross, 2013; Cutter et al., 2008; Leonard, McCrea, & Walton, 2016; Magis, 2010; Norris, Stevens, Pfefferbaum, Wyche, & Pfefferbaum, 2008; Ross & Berkes, 2013; Walton et al., 2013; Williams & Walton, 2014), and social licence to operate (e.g., Lacey, Carr-Cornish, Zhang, Eglinton, & Moffat, 2017; McCrea, Walton, Jeanneret, Lacey, & Moffat, 2017; Moffat, Lacey, Zhang, & Leipold, 2016; Moffat & Zhang, 2014; Moffat, Zhang, & Boughen, 2014; Williams & Walton, 2014; Zhang & Moffat, 2015).

The expanded wellbeing and attitude survey format developed for the Narrabri 2017 survey (Community Wellbeing and Local Attitudes towards CSG Development) will be edited and used in the 2018 Qld survey. The expanded survey maintains the questions used in the 2014 and 2016 Qld surveys but has additional items included to measure the underlying drivers of social acceptance. The additional items have been validated and found to be reliable measures. The measures of community wellbeing and attitudes to CSG development, and measures of their underlying drivers, each contain a number of questions, as detailed below.

The community wellbeing measures have 15 underlying dimensions, each with their own set of questions. There are also measures relating to community resilience, coping, and adapting. In this third survey, measures of attitudes and perceptions of CSG will also include underlying drivers of social licence to operate:

- 1. Perceived impacts and risks
- 2. Perceived benefits local and societal

- 3. Perceived fairness procedural and distributional
- 4. Trust in government and CSG companies
- 5. Quality of relationships and responsiveness of CSG companies
- 6. Governance formal (compliance, regulations) and informal (planning, collaboration)
- 7. Knowledge, information sources, and previous experience with the sector
- 8. Feelings towards coal seam gas, measuring positive emotions (pleased, optimistic) and negative emotions (angry, worried)
- 9. Attitudes towards CSG development acceptance of CSG development in the shire

As a result, the third survey is longer than the second survey. The survey will also include demographic questions to describe the sample of participants and their representativeness, as well as to explore demographic and geographic differences in the results.

#### What do you expect it will deliver?

- A report on trends in community wellbeing and attitudes to CSG for the Western Downs and Eastern Maranoa regions across different industry phases: the construction, post-construction and operation phases
- Feedback sessions and shared learning with key community, farming, industry, and government stakeholders:
  - 1) To share the latest findings and develop 'lessons learned' from over 8 years of community wellbeing research in Queensland
  - 2) To identify any outstanding issues relating to community wellbeing and CSG activities.
- Concise and effective communication products targeted for lay audiences on lessons learned about community wellbeing in the context of CSG development over time in Queensland. For example:
  - 1) A communique with infographics
  - 2) A multi-media video
  - 3) A short paper/ article e.g. industry publications or The Conversation
  - 4) A user-friendly and interactive website for displaying the survey findings
- A scientific journal paper around community wellbeing in the context of CSG development

#### How does the proposal relate to community or industry benefits?

 The lessons learned from this research for local communities, industry and governments will be invaluable in understanding the impacts on community wellbeing over different industry cycles. This will assist stakeholders in their planning by helping communities and government to know what to expect, facilitating proactive actions for mitigating impacts, and potentially allaying fears over potential impacts of CSG development.

- Measuring and researching the underlying drivers of social acceptance will help industry and government direct their efforts at addressing those issues that matter to host communities. This knowledge will help to guide government and industry in what is required to meet communities expectations as to how the CSG sector should be operating for in a way that supports social acceptance of the industry within the community. This is important for communities and the unconventional gas industry in Qld, both now and in the future, especially as more land is released for unconventional gas development in Qld.
- Analysis of trends in community wellbeing, resilience and attitudes to CSG development across multiple phases of industry development, together with regional comparisons, will better inform strategic planning and policy in community, government and industry spheres, as well as contributing to a more informed public discussion around CSG development, community wellbeing and the industry's social licence to operate.

## 7. Budget Summary

Expenditure	2017/18	2018/19	2019/20	Total
Labour	71,001	97,473	0	168,474
Operating	7,000	25,000	0	32,000
Subcontractors	40,000	0	0	40,000
Total Expenditure	118,001	122,473	0	240,474

Expenditure per Task	2017/18	2018/19	2019/20	Total
Task 1	80,500	0	0	80,500
Task 2	37,500	0	0	37,500
Task 3	0	61,236	0	61,236
Task 4	0	61,236	0	61,236
Total Expenditure	118,001	122,473	0	240,474

Source of Cash	2017/18	2018/19	2019/20	Total
Contributions				Total
GISERA Industry Partners (70%)	82,601	85,731	0	168,332
- APLNG (35%)	41,300.50	42,865.50	0	84,166
- QGC (35%)	41,300.50	42,865.50	0	84,166
Total Cash Contributions	82,601	85,731	0	168,332

In-Kind Contribution from Partners	2017/18	2018/19	2019/20	Total
CSIRO (30%)	35,400	36,742	0	72,142
Total In-Kind Contribution from Partners	35,400	36,742	0	72,142

	Total funding over all years	Percentage of Total Budget
GISERA Investment	168,332	70%
CSIRO Investment	72,142	30%
Total Other Investment	-	-
TOTAL	240,474	100%

Task	Milestone Number	Milestone Description	Funded by	Start Date	Delivery Date	Fiscal Year Completed	Payment \$ (excluding CSIRO contribution)
Task 1	1	Revise and conduct the survey	GISERA	1 Feb 18	13 Apr 18	2017-18	\$56,350
Task 2	2	Technical Report 1 – Trends in CWB and attitudes to CSG in the Western Downs and Eastern Maranoa: 2014, 2016 and 2018	GISERA	16 Apr 18	30 Jun 18	2017-18	\$26,250
Task 3	3	Sharing findings, key messages, and lessons learned. Developing communication products	GISERA	1 Jul 18	31 Dec 18	2018-19	\$42,866
Task 4	4	Finalising the communication product(s), disseminating findings, and writing a scientific paper	GISERA	1 Jan 19	31 Mar 19	2018-19	\$42,866

#### 8. Other Researchers (include organisations)

This project will be undertaken by CSIRO social scientists Drs Rod McCrea and Andrea Walton, who have successfully completed the previous community wellbeing surveys in Queensland in 2014 and 2016, and in the Narrabri Shire in 2017. An allocation of 30 days each has been made to 30 June 2018 which increases to 40 days each from 1 July 2018 to 31 March 2019, which includes additional community and stakeholder engagement activities after the release of project findings.

Researcher	Time Commitment (project as a whole)	Principle area of expertise	Years of experience	Organisation
Dr Rod McCrea	30 days (Feb-Jun 2018)	Community wellbeing &	10	CSIRO
	40 days (Jul 2018 to Mar 2019)	quantitative methods		
Dr Andrea Walton	30 days (Feb-Jun 2018)	Community wellbeing &	8	CSIRO
DI Allurea Walton	40 days (Jul 2018 to Mar 2019)	social psychology	0	CSINO

#### 9. Subcontractors

Subcontractors	Subcontractor	Role
(clause 9.5(a)(i))	Q&A Market Research	Telephoning and interviewing survey
		respondents
	TBA - The budget for	Produce an engaging comms product
	communication products is	(e.g., a video with key messages or an
	included in the operating budget	interactive website displaying data and
	for 2018/19. It is not clear yet	key findings)
	whether or how much of this	
	component will be subcontracted	
	(cf. being developed internally),	
	and no amount has been	
	specified for subcontracting	
	communication products at this	
	stage.	

#### 10. Project Objectives and Outputs

The specific objectives and outputs for this project relate directly to the two main aims above. Briefly recapping, these are:

- Aim 1 To better understand when and why levels of community wellbeing and attitudes to CSG vary over different phases of CSG development.
- Aim 2 To effectively communicate key messages and lessons from this latest phase of research, within the wider context of findings from this program of community wellbeing research first commencing in 2012.

The objectives and outputs are detailed in the Project Plan below. Briefly, these are:

- To revise and conduct the latest CSIRO survey of community wellbeing and attitudes to CSG survey development in the Western Downs and Eastern Maranoa
- To effectively communicate the findings to key community, industry and government stakeholders
- To produce a technical report, a scientific journal paper, communication products, and to engage community, industry and government stakeholders with the findings.

The key messages and lessons learned from this research for local communities, industry and governments will be invaluable in improving local community wellbeing in CSG activity regions; targeting issues associated with social acceptance of CSG development in the operations phase; as well as contributing to a more informed public discussion around CSG development and community wellbeing.

#### 11. GISERA Objectives Addressed

This research addresses both of CSIRO's GISERA two main aims, which are:

- 1) To carry out research and provide information for the benefit of all Australian communities in onshore gas regions and industry.
- 2) To inform governments and policy-makers of key research outcomes.

More specifically, it addresses GISERA's key objectives of

- Improving and extending knowledge of social and environmental impacts and opportunities of unconventional gas projects for the benefit of the Gas Industry, the relevant community and the broader public.
- 2) Informing government, regulators and policy-makers on key issues regarding policy and legislative framework for the Gas Industry.

#### 12. Project Development

When presenting findings from the 2014 and 2016 surveys in Qld, there were invariably calls from community, industry, and other stakeholders about the need to continue monitoring community wellbeing and social acceptance of CSG development in Qld. With the second survey, this was around comparing the

busy construction period with the much less busy post-construction period in 2016 when there was a lull in CSG development activity. With this third survey, there is interest in comparing previous phases in CSG development with a more steady operational phase in Qld in 2018.

This project builds on previous CSIRO surveys of community wellbeing and attitudes to CSG development in both south west Qld and north west NSW. Previous surveys in south west Qld provide the basis for measuring trends in community wellbeing and attitudes to CSG development across different phases, while the more recent 2017 survey in north west NSW provides more detailed measures for the main factors underlying social acceptance of CSG development. These can also be used to identify any unresolved issues associated with the industry's social licence to operate in Qld.

The communication products for key messages and lessons learned will provide an opportunity to engage with the wider public and those with limited time to digest the detailed reports and findings. It will draw mainly from the community wellbeing research in Qld, though will also draw on lessons learned in other social and economic projects undertaken in Qld and NSW to give a broader context for lessons learned and key messages for Qld, now and into the future.

### 13. Project Plan

## 13.1 Project Schedule

ID	Task Title	Task Leader	Scheduled Start	Scheduled Finish	Predecessor
Task 1	Revise and conduct the survey	Rod McCrea	1 Feb, 2018	13 April 2018	n.a.
Task 2	Technical Report – Trends in CWB and attitudes to CSG in the	Andrea Walton	16 Apr, 2018	30 Jun, 2018	Task 1
	Western Downs and Eastern Maranoa: 2014, 2016 and 2018				
Task 3	Sharing findings, key messages, and lessons learned. Developing communication products	Andrea Walton	1 July, 2018	31 Dec, 2018	Task 2
Task 4	Finalising the communication product(s), disseminating findings, and writing a scientific paper	Rod McCrea	1 Jan, 2019	31 Mar, 2019	Task 3

#### Task 1 TASK NAME: Revise and conduct the survey TASK LEADER: Rod McCrea OVERALL TIMEFRAME: 1 Feb 2018 to 13 April 2018

**BACKGROUND:** The survey and sampling design from previous years need minor revisions to ensure that the survey captures additional aspects of social acceptance relating to the operations phase in Qld and the sample captures additional farmers with active CSG leases on their property and additional residents from the eastern Maranoa region in Qld.

**TASK OBJECTIVE:** Submit and attain ethics approval. Revise and conduct the CSIRO Survey of Community Wellbeing and Local Attitudes to CSG Development for 2018 in the Western Downs and eastern Maranoa regions. Prepare the dataset for analysis.

**TASK OUTPUTS:** Revised sampling and survey design. A clean 2018 dataset linking the 2018 data to the 2014 and 2016 datasets to comparable and test changes over time.

SPECIFIC DELIVERABLES: A clean data file (i.e., free of errors) linking 2014, 2016 and 2018 survey data

#### Task 2

**TASK NAME:** Technical Report – Trends in community wellbeing and local attitudes to CSG in south west Qld: 2014, 2016 and 2018

TASK LEADER: Andrea Walton

OVERALL TIMEFRAME: 16 Apr 2018 to 30 June 2018

**BACKGROUND:** (Aim 1) The data needs to be analysed both in terms of current wellbeing and attitudes to CSG in 2018, as well as identifying any trends over different industry phases in Qld: the construction phase in 2014; post-construction in 2016; and operations phase in 2018. These results need to be presented in ways that are relevant to and easily understood by community and other stakeholders while maintaining its scientific merit.

**TASK OBJECTIVE:** To understand and measure the changes in community wellbeing and community adaptation across different industry phases in Qld.

SPECIFIC DELIVERABLES: Technical report

#### Task 3

TASK NAME: Sharing findings and co-developing key messages and lessons learned; developing communication product(s)

TASK LEADER: Andrea Walton

OVERALL TIMEFRAME: 1 Jul 2018 to 31 Dec 2018

**BACKGROUND:** An important component of GISERA research is sharing our findings with community, farming, industry, research and government stakeholders, including tailoring communication to meet the needs of specific stakeholders and identifying opportunities to improve community wellbeing and adaptation to CSG development in the region. A series of small discussion groups will be organised with various community, farming, industry, research and government stakeholders to share these findings, encourage their use in plans and policy, and co-develop the key message and lessons for these stakeholders

from the Qld CSG development experience. Co-developing key messages and lessons from the findings will ensure the communication products developed in Task 4 will be useful and impactful.

**TASK OBJECTIVE:** Sharing findings and co-developing key messages and lessons learned from this program of research.

**SPECIFIC DELIVERABLES:** Communication activities and products (e.g., a communique and video) which summarise key messages and lessons learned from this program of research in south west Qld on community wellbeing and adapting to the CSG industry.

#### Task 4

TASK NAME: Disseminating findings and finalising communication product(s)

TASK LEADERS: Rod McCrea

OVERALL TIMEFRAME: 1 Jan 2019 to 31 Mar 2019

**BACKGROUND:** The findings of this research will be presented at various GISERA knowledge transfer sessions, symposiums and other forums. The budget also allows for one inter-state trip to be made to present the findings from this research to an interstate forum or conference. We also plan to write a scientific paper for an international journal, which is an important part of establishing and maintaining the credibility of GISERA research.

**TASK OBJECTIVE:** Disseminate our findings to a broad audience and enhance the reputation of GISERA and CSIRO research in the CSG space.

**SPECIFIC DELIVERABLES:** A journal paper submitted to CSIRO ePublish and disseminating communication products (e.g., a communique and video)

#### 14. Communications Plan

Communication of the results of the project will be managed in accordance with GISERA's communication strategy. This may include presentations at community and industry meetings, symposiums and conferences, the publication of scientific reports and papers, as well as developing communications products for the key findings. In addition, our communication with relevant state and federal government agencies and departments will ensure that they are aware of the outcomes of this research and consider any possible policy implications.

## 15. Intellectual Property and Confidentiality

Background IP (clause	Party	Description of	Restrictions on use	Value
11.1, 11.2)		Background IP	(if any)	
				\$
				\$
Ownership of Non-	CSIRO			
Derivative IP (clause				
12.3)				
Confidentiality of Project	Project Result	ts are not confidentia	l.	
Results (clause 15.6)				
Additional	Not Applicabl	e		
Commercialisation				
requirements (clause				
13.1)				
Distribution of	Not Applicabl	e		
Commercialisation				
Income				
(clause 13.4)				
Commercialisation	Party		Commercialisation I	nterest
Interest (clause 1.1)	APLNG		Not Applicable	
	QGC		Not Applicable	
	CSIRO		Not Applicable	

#### References

- Berkes, F., & Ross, H. (2013). Community Resilience: Toward an Integrated Approach. *Society & Natural Resources, 26*(1), 5-20. doi: 10.1080/08941920.2012.736605
- Centre for Coal Seam Gas. (2016). 2016 Annual Report Queensland Gasfields Annual Socioeconomic Report. Brisbane: University of Queensland.
- Christakopoulou, S., Dawson, J., & Gari, A. (2001). The community well-being questionnaire: Theoretical context and initial assessment of its reliability and validity. *Social Indicators Research*, *56*(3), 321-351.
- Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change-Human and Policy Dimensions, 18*(4), 598-606. doi: 10.1016/j.gloenvcha.2008.07.013
- Fleming, D., Measham, T., Graham, P., & Cai, Y. (2016). Employment scenarios in Queensland CSG Regions 2014–2034: a report to the Gas Industry Social and Environmental Research Alliance (GISERA). Canberra: CSIRO.
- Forjaz, M. J., Prieto-Flores, M. E., Ayala, A., Rodriguez-Blazquez, C., Fernandez-Mayoralas, G., Rojo-Perez, F., & Martinez-Martin, P. (2011). Measurement properties of the Community Wellbeing Index in older adults. *Quality of Life Research*, 20(5), 733-743. doi: 10.1007/s11136-010-9794-2
- Lacey, J., Carr-Cornish, S., Zhang, A., Eglinton, K., & Moffat, K. (2017). The art and science of community relations: Procedural fairness at Newmont's Waihi Gold operations, New Zealand. *Resources Policy*, 52, 245-254. doi: <u>http://doi.org/10.1016/j.resourpol.2017.03.001</u>
- Leonard, R., McCrea, R., & Walton, A. (2016). Perceptions of community responses to the unconventional gas industry: The importance of community agency. *Journal of Rural Studies, 48*, 11-21.
- Magis, K. (2010). Community Resilience: An Indicator of Social Sustainability. *Society & Natural Resources,* 23(5), 401-416. doi: 10.1080/08941920903305674
- McCrea, R., Walton, A., Jeanneret, T., Lacey, J., & Moffat, K. (2017). *Attitudes and social acceptance in the waste and resource recovery sector*. Brisbane, Australia: CSIRO Retrieved from https://publications.csiro.au/rpr/download?pid=csiro:EP165110&dsid=DS3.
- McCrea, R., Walton, A., & Leonard, R. (2014). A conceptual framework for investigating community wellbeing and resilience. *Rural Society*, 23(3), 270-282. doi: 10.1080/10371656.2014.11082070
- McCrea, R., Walton, A., & Leonard, R. (2016). Developing a model of community wellbeing and resilience in response to change. *Social Indicators Research, 29*(1), 195-214. doi: DOI 10.1007/s11205-015-1099-y
- Moffat, K., Lacey, J., Zhang, A., & Leipold, S. (2016). The social licence to operate: A critical review. *Forestry: An International Journal of Forest Research.*, *89*(5), 477-488.
- Moffat, K., & Zhang, A. (2014). The paths to social licence to operate: An integrative model explaining community acceptance of mining. *Resources Policy*, 61-70.
- Moffat, K., Zhang, A., & Boughen, N. (2014). Australian attitudes toward mining: Citizen survey 2014 results. Brisbane: CSIRO Retrieved from <u>http://www.csiro.au/en/Research/MRF/Areas/Community-and-environment/Resources-in-the-community/Attitudes-to-mining-survey</u>.
- Morton, A., & Edwards, L. (2013). Community Wellbeing Indicators: Measures for Local Government. Sydney: Australian Centre of Excellence for Local Government, University of Technology.
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1-2), 127-150. doi: 10.1007/s10464-007-9156-6

- Onyx, J., & Leonard, R. (2010). The conversion of social capital into community development: An intervention in Australia's outback. *International Journal of Urban and Regional Research, 34*(2), 381-397.
- Queensland Government Statician's Office. (2015). *Surat Basin Population Report, 2015*. Brisbane: The State of Queensland (Queensland Treasury) Retrieved from <a href="http://www.qgso.qld.gov.au/products/reports/surat-basin-pop-report/surat-basin-pop-report-2015.pdf">http://www.qgso.qld.gov.au/products/reports/surat-basin-pop-report-2015.pdf</a>.
- Rifkin, W., Uhlmann, V., Everingham, J., & May, K. (2014). Tracking the Boom in Queensland's Gasfields. International Journal of Rural Law and Policy, Special edition 1, 1-9.
- Ross, H., & Berkes, F. (2013). Community Resilience: A Rejoinder to Debra J. Davidson. *Society & Natural Resources, 26*(1), 25-29. doi: 10.1080/08941920.2012.749769
- Sirgy, M. J., Widgery, R. N., Lee, D. J., & Yu, G. B. (2010). Developing a Measure of Community Well-Being Based on Perceptions of Impact in Various Life Domains. *Social Indicators Research*, *96*(2), 295-311. doi: 10.1007/s11205-009-9479-9
- Towler, B., Firouzi, M., Underschultz, J., Rifkin, W., Garnett, A., Schultz, H., . . . Witt, K. (2016). An overview of the coal seam gas developments in Queensland. *Journal of Natural Gas Science and Engineering*, *31*, 249-271. doi: 10.1016/j.jngse.2016.02.040
- Walton, A., & McCrea, R. (2017). Community wellbeing and local attitudes to coal seam gas development Social Baseline Assessment: Narrabri project - Phase 3 Survey report. Australia: CSIRO.
- Walton, A., McCrea, R., & Leonard, R. (2016). *The 2016 CSIRO Community Wellbeing and Responding to Change survey: Western Downs region, Queensland Changes between 2014 and 2016 in the Context of Coal Seam Gas Development*. Brisbane: CSIRO Retrieved from <u>www.gisera.org.au</u>.
- Walton, A., McCrea, R., Leonard, R., & Williams, R. (2013). Resilience in a changing community landscape of coal seam gas: Chinchilla in southern Queensland. *Journal of Economic and Social Policy - Special Edition: The Economic and Social Policy Implications of Coal Seam Gas Mining (CSG) in Australia,* 15(3), 1-23.
- Walton, A., Williams, R., & Leonard, R. (2017). Community perspectives of coal seam gas development during two phases of industry activity: construction and post-construction. *Rural Society*, 26(1), 85-101. doi: 10.1080/10371656.2017.1293546
- Williams, R., & Walton, A. (2014). Community Expectations and Coal Seam Gas Development: A report to the Gas Industry Social and Environmental Research Alliance (GISERA). Australia: CSIRO Retrieved from https://gisera.org.au/wp-content/uploads/2016/04/socioeco-proj-5-community-expectations.pdf.
- Zhang, A., & Moffat, K. (2015). A balancing act: The role of benefits, impacts and confidence in governance in predicting acceptance of mining in Australia. *Resources Policy*, 44, 25-34. doi: 10.1016/j.resourpol.2015.01.001



# **2** Variations to Project Order

Changes to research Project Orders are approved by the GISERA Director, acting with authority provided by the GISERA National Research Management Committee, in accordance with the National GISERA Alliance Agreement.

The table below details variations to research Project Order.

#### **Register of changes to Research Project Order**

Date	lssue	Action	Authorisation
7/3/19	Additional time required to refine website and undertake additional communication activities.	Milestone 4 extended to May-19.	Bart















## **3 Progress against project milestones**

Progress against milestones are approved by the GISERA Director, acting with authority provided by the GISERA National Research Management Committee, in accordance with the <u>National GISERA</u> <u>Alliance Agreement</u>.

Progress against project milestones/tasks is indicated by two methods: Traffic Light Reports and descriptive Project Schedule Reports.

- 1. Traffic light reports in the Project Schedule Table below show progress using a simple colour code:
  - Green:
    - Milestone fully met according to schedule.
    - Project is expected to continue to deliver according to plan.
    - Milestone payment is approved.
  - Amber:
    - Milestone largely met according to schedule.
    - Project has experienced delays or difficulties that will be overcome by next milestone, enabling project to return to delivery according to plan by next milestone.
    - Milestone payment approved for one amber light.
    - Milestone payment withheld for second of two successive amber lights; project review initiated and undertaken by GISERA Director.
  - **Red**:
    - Milestone not met according to schedule.
    - Problems in meeting milestone are likely to impact subsequent project delivery, such that revisions to project timing, scope or budget must be considered.
    - Milestone payment is withheld.
    - Project review initiated and undertaken by GISERA Research Advisory Committee.
- 2. Progress Schedule Reports outline task objectives and outputs and describe, in the 'progress report' section, the means and extent to which progress towards tasks has been made.

NSW











## **Project Schedule Table**

ID	Task Title	Task Leader	Scheduled Start	Scheduled Finish	Predecessor
Task 1	Revise and conduct the survey	Rod McCrea	Feb 2018	April 2018	N/A
Task 2	Technical Report - Trends in CWB and attitudes to CSG in the Western Downs and Eastern Maranoa: 2014, 2016 and 2018	Andrea Walton	Apr 2018	Jun 2018	Task 1
Task 3	Sharing findings, key messages, and lessons learned. Developing communication products	Andrea Walton	July 2018	Dec 2018	Task 2
Task 4	Finalising the communication product(s), disseminating findings, and writing a scientific paper	Rod McCrea	Jan 2019	May 2019	Task 3















## **Project Schedule Report**

#### Task 1

TASK NAME: Revise and conduct the survey

TASK LEADER: Rod McCrea

OVERALL TIMEFRAME: 1 Feb 2018 to 13 April 2018

**BACKGROUND:** The survey and sampling design from previous years need minor revisions to ensure that the survey captures additional aspects of social acceptance relating to the operations phase in Qld and the sample captures additional farmers with active CSG leases on their property and additional residents from the eastern Maranoa region in Qld.

**TASK OBJECTIVE:** Submit and attain ethics approval. Revise and conduct the CSIRO Survey of Community Wellbeing and Local Attitudes to CSG Development for 2018 in the Western Downs and eastern Maranoa regions. Prepare the dataset for analysis.

**TASK OUTPUTS:** Revised sampling and survey design. A clean 2018 dataset linking the 2018 data to the 2014 and 2016 datasets to comparable and test changes over time.

**SPECIFIC DELIVERABLES:** A clean data file (i.e., free of errors) linking 2014, 2016 and 2018 survey data.

#### **PROGRESS REPORT:**

Task 100% complete. The survey was in the field longer than expected due to the longer length of this 2018 survey and the larger sample size. Task 1 was completed on 30 April with the survey data collected, cleaned, merged with data for other years, and weighted by age and gender to ensure representativeness.

#### Task 2

TASK NAME: Technical Report - Trends in community wellbeing and local attitudes to CSG in south west Qld: 2014, 2016 and 2018

TASK LEADER: Andrea Walton

OVERALL TIMEFRAME: 16 Apr 2018 to 30 June 2018

**BACKGROUND:** (Aim 1) The data needs to be analysed both in terms of current wellbeing and attitudes to CSG in 2018, as well as identifying any trends over different industry phases in Qld: the construction phase in 2014; post-construction in 2016; and operations phase in 2018. These results need to be presented in ways that are relevant to and easily understood by community and other stakeholders while maintaining its scientific merit.

**TASK OBJECTIVE:** To understand and measure the changes in community wellbeing and community adaptation across different industry phases in Qld.

SPECIFIC DELIVERABLES: Technical report

#### **PROGRESS REPORT:**

Task 100% complete. The final report titled '<u>Trends in community wellbeing and local attitudes to</u> coal seam gas development, 2014 -2016 -2018' is now available on the GISERA website.

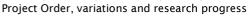
#### Task 3

TASK NAME: Sharing findings and co-developing key messages and lessons learned; developing communication product(s)

TASK LEADER: Andrea Walton

**OVERALL TIMEFRAME**: 1 Jul 2018 to 31 Dec 2018 **BACKGROUND:** An important component of GISERA research is sharing our findings with community, farming, industry, research and government stakeholders, including tailoring





NORTHERN TERRITORY



communication to meet the needs of specific stakeholders and identifying opportunities to improve community wellbeing and adaptation to CSG development in the region. A series of small discussion groups will be organised with various community, farming, industry, research and government stakeholders to share these findings, encourage their use in plans and policy, and codevelop the key message and lessons for these stakeholders from the Qld CSG development experience. Co-developing key messages and lessons from the findings will ensure the communication products developed in Task 4 will be useful and impactful.

**TASK OBJECTIVE:** Sharing findings and co-developing key messages and lessons learned from this program of research.

**SPECIFIC DELIVERABLES:** Communication activities and products (e.g., a communique and video) which summarise key messages and lessons learned from this program of research in south west Qld on community wellbeing and adapting to the CSG industry.

#### **PROGRESS REPORT:**

The project findings have been shared with local community, industry, and government stakeholders.

- Presentation to Western Downs community stakeholders, Chinchilla Nov 1, 2018
- Presentation to Maranoa community stakeholders, Roma Nov 2, 2018
- Knowledge transfer session for industry and government stakeholders, Dec 11, 2018.

The survey report is completed, including key messages, and will be publicly available from the GISERA website on Dec 19, 2018. It is titled 'Trends in community wellbeing and local attitudes to coal seam gas development, 2014 - 2016 - 2018: Western Downs and Eastern Maranoa regions, Queensland.'

Three fact sheets highlighting key findings from the research are in progress and will be available by the end of January 2019. An interactive online display of the research results is also in development. This will be available through the GISERA website and provide opportunity for the public to engage with the research findings.

#### Task 4

TASK NAME: Disseminating findings and finalising communication product(s)

#### TASK LEADERS: Rod McCrea

OVERALL TIMEFRAME: 1 Jan 2019 to 31 Mar 2019

**BACKGROUND:** The findings of this research will be presented at various GISERA knowledge transfer sessions, symposiums and other forums. The budget also allows for one inter-state trip to be made to present the findings from this research to an interstate forum or conference. We also plan to write a scientific paper for an international journal, which is an important part of establishing and maintaining the credibility of GISERA research.

**TASK OBJECTIVE:** Disseminate our findings to a broad audience and enhance the reputation of GISERA and CSIRO research in the CSG space.

**SPECIFIC DELIVERABLES:** A journal paper submitted to CSIRO ePublish and disseminating communication products (e.g., a communique and video) **PROGRESS REPORT:** 

- The final communication product a <u>data visualisation website</u> for the survey results was developed and approved for release.
- Two presentations of findings from the 3rd CSIRO Survey of Community Wellbeing and Local Attitudes to Coal Seam Gas Development were given.
- The scientific paper has been written and reviewed and will be submitted to an international journal.









