



Project Order

Proforma 2020

1. Short Project Title

Perspectives on risk to local markets and industries

Long Project Title

Understanding risk perspectives to local markets and industries from onshore gas and potential protection measures

GISERA Project Number

L.9

Proposed Start Date

1 July 2020

Proposed End Date

31 March 2022

Project Leader

Neil Huth

2. GISERA Region

- | | | |
|--|--|---|
| <input type="checkbox"/> Queensland | <input type="checkbox"/> New South Wales | <input type="checkbox"/> Northern Territory |
| <input checked="" type="checkbox"/> South Australia | <input type="checkbox"/> Western Australia | <input type="checkbox"/> Victoria |

3. GISERA Research Program

- | | | |
|--|--|---|
| <input type="checkbox"/> Water Research | <input type="checkbox"/> GHG Research | <input type="checkbox"/> Social & Economic Research |
| <input type="checkbox"/> Biodiversity Research | <input checked="" type="checkbox"/> Agricultural Land Management Research | <input type="checkbox"/> Health Research |

4. Project Summary

Objective

This project will assist community understanding and inform public communications and policy development relating to any potential market impacts and associated concerns relating to the value of place of origin labelling and branding arising from conventional gas development in the south east of South Australia.

Description

The term “Risk” has many definitions (e.g. ISO 31000 (2009)) but a simple definition is the potential for uncontrolled loss of something of value. Value here can include many dimensions, such as wealth or well-being, and these can be gained or lost when taking risks resulting from action or inaction. The concept of risk also includes outcomes of actions in the face of uncertainty, where uncertainty is a potential, unpredictable, and uncontrollable outcome. Risk therefore describes impacts on value from action taken in spite of uncertainty. Risk perception is the subjective judgment individuals may make about the severity and probability of a risk.

As found in a previous GISERA study [‘Understanding natural gas impacts and opportunities on agriculture in the South East of South Australia’](#) (project L8), there is perception that South East South Australia's superior agricultural exports in important markets could be challenged by the development of the natural gas industry and a recurring message around the high relative value associated with “clean and green” primary production markets. The value of Australia's agriculture and livestock is inherently tied to the perception of Australia as a country of well managed land and water, and fresh produce. The south east of South Australia region and its Limestone Coast regional branding in particular places ‘clean and green’ attributes central to its identity, stating the ‘epitome of clean, green environment’ as a current strength and ‘maintaining the clean green image of the region’s produce’ is identified as a priority for maintaining comparative advantage and business competitiveness ([Limestone Coast Regional Roadmap - Regional Development Australia](#)).

These concerns arise from a valuing of a local south east of South Australia ‘brand’. A brand can be described as any feature that identifies one seller’s goods or services from another’s. Brand is used extensively in business to add and store value for buyers and sellers. Agriculture in the south east of South Australia region has placed great value in its local brand and there is a perception of risk to this brand from gas development. This project examines the value of the south east of South Australia ‘brand’ from a producer and consumer perspective and the potential risks to this value.

Finally, stakeholders raised concerns in the previous study (project L8) that efforts to help protect the regional image could do damage to that which they seek to protect by bringing wider public attention to issues of unknown importance. Therefore, this project has been designed to minimize risk to brands arising from the research itself.

To formulate advice to both the primary industries and gas industry on enhancing the market values associated with regional produce, any perceived risks and its protection, we will:

- 1) Investigate and report on the markets and value of key agriculture, food and wine products from south east of South Australia, use of branding, and methods for improved understanding of place of origin labelling and brand value and risks, based on a review of literature from Australia and overseas.
- 2) Develop and conduct an initial qualitative survey with primary producer stakeholders (at least 6) engaged with marketing local produce to determine perceived value and risks from gas development.
- 3) Develop and employ a quantitative survey technique, based on information from previous stages, to better understand the value of attributes customers associate with south east of South Australia products and possible impacts of perceived risks on the purchasing decisions by customers.
- 4) Provide a report describing
 - a. the role of place of origin labelling and branding in key agriculture, food and wine industries in the south east of South Australia
 - b. possible mechanisms for impacts on related markets
 - c. possible methods for managing the risks to important markets
 - d. research gaps or topics requiring further research to inform future policy

Need & Scope

Previous research in GISERA South Australia project [Understanding natural gas impacts and opportunities on primary industries](#) (project L8) has been undertaken to assist community understanding and inform public policy development relating to potential primary industry impacts and opportunities from conventional gas development in the south east of South Australia to minimise misinformation and maximise opportunities in the region. To achieve this, the project collated basic data on the environment of the local primary industries in the south east of South Australia, engaged with the primary industry and environmental stakeholders via in-depth interviews of relevant individuals, and provided a review of the literature relating to issues raised in the interviews.

This project found that local stakeholders value the “Clean and Green” image of the region targeted in regional growth strategies. However, for several primary industry stakeholders, particularly those involved with branded local produce, it was not clear that prominent gas development fitted comfortably within this regional image and branding, even though the regional growth strategy includes clear intent to increase the availability and reliability of energy through the development of renewable energy sources. Furthermore, as found in previous studies from other regions, stakeholders may not be prepared to compromise their concern over the

potential for natural resource, environmental and reputational risk when weighing up costs and benefits. For many, the perceived local benefits from past and expected gas developments were not considered to balance perceived risks to agriculture and regional brands.

The project identified areas for further research, including:

- quantitative analysis of resource development impacts on regional and market brands
- investigating the impact of debate on the perceived value of brands

GISERA research over the past decade has included measurement and analysis of a range of possible emissions pathways in efforts to identify any possible physical environmental risks. However, GISERA has not examined risks associated with markets, brands and associated consumer perceptions. This proposed project seeks to address these issues. It also provides the opportunity to explore the relationship between influential perceptions with distance and visual exposure. Intensity of visual exposure to mining activity has been associated with the expressed level of concern in other regions (e.g. [Moran and Brereton 2013](#)) and the proposed methods allow this relationship to be explored (e.g. the role of setback distance or the value attributable to the origin of produce being in the highly regarded Coonawarra or 'Penola' localities).

Methodology

The project will pursue one of the key issues raised by primary industry stakeholders from the previous project L8. This will initially involve a consultation phase with representative stakeholders in the local agriculture, food and wine sector to further define the concerns and perceived risks to branded produce and the 'clean and green' marketing of agricultural production in the region associated with gas industry-related activity. At least 6 semi-structured interviews will be conducted with representatives from food and wine sectors. These interviews will inform the focus of further research in terms of particular markets, perceived risks and concerns related to products from the local region.

The initial scoping phase will also be supplemented by a review of literature from Australia and overseas on the value of brand in markets for agricultural, food and wine industries, perceived risks to such brands, and methods for improved understanding of these risks. This will include examples and learnings from where primary production co-exists with the resource industry as well as market analysis for produce from the south-east region. This will be included in a report that also brings together industry and market data related to agriculture, food and wine production from the region with an emphasis on branded produce and marketing.

This initial agricultural market analysis and interview phase with local representatives of the food and wine industries in the SE will be used to inform the larger quantitative study in the next phase. It is essential that the scoping phase be conducted before fixing a target consumer interview sample.

Informed by findings from Phase 1 the project will utilize the extensive experience of agricultural economists from the University of Adelaide (Centre for Global Food & Resources) who are internationally recognized experts in research methods for understanding consumer and producer behaviour related to agriculture, food and wine products. By partnering with the University of Adelaide we will have access to a highly flexible consumer stratified consumer panel (of over 1000 potential candidates) for data collection that can be used to collect consumer perceptions and intentions from consumers in locations that are identified as key to the brand risks identified by the local stakeholders. The consumer interviewee sample is available through the University of Adelaide's ongoing FoodIQ partnership with Dynata (Survey Sampling International) - one of the leading consumer market research companies (<https://www.adelaide.edu.au/global-food/research/food-insights-quarterly-foodiq-is-a-3-monthly-online-survey-of-australian-food>). The required final sample numbers and profile will be known once the scoping phase identifies the complexity of factors and depth required to account statistically for the factors raised by stakeholders and scoping.

In Phase 2, the research methods will be survey based and will quantify the value placed by consumers on localized/regional branding and associated attributes. It is expected that two case study markets will be investigated. The research will apply well-established willingness-to-pay methodology as well as further identify reasoning behind the valuing of attributes and if there are any potential perceived risks from the consumer perspective.

Examples of relevant studies involving the collaborators include:

L. Emilio Morales, Garry Griffith, Victor Wright, Euan Fleming, **Wendy Umberger**, Nam Hoang (2013) Variables affecting the propensity to buy branded beef among groups of Australian beef buyers. Meat Science <https://doi.org/10.1016/j.meatsci.2013.02.005>

Malek, L., Umberger, W., & Rolfe, J. (2017). Segmentation of Australian meat consumers based on attitudes regarding farm animal welfare and the environmental impact of meat production. Animal Production Science, 58(3).

Loureiro, M.L. and **W.J. Umberger**. 2007. A Choice Experiment Model for Beef: What US Consumer Responses Tell Us About Relative Preferences for Food Safety, Country-of-Origin Labeling and Traceability. Food Policy. 32:496-514. <https://www.sciencedirect.com/science/article/pii/S030691920600114X>

The final methodology will be informed by the scoping exercise which will help to identify the key markets, consumers and factors likely to be of most relevance. The methodology selected will be purposefully multi-variate in that it allows for not only other factors to be statistically identified and separated but also interactions between other factors (e.g. demographic, geographical, environmental orientation etc.) and key drivers of brand perceptions to be identified. The methods involved will typically involve conjoint analysis.

This is survey-based statistical technique where the multiple attributes of a product are presented together, rather than simply seeking opinion on just one aspect. It recognizes the reality of consumer choice and avoids potential bias towards overstatement the importance of just one attribute which can happen when respondents are asked to consider just one attribute (or risk). Respondents rank, rate, or choose between competing product profiles that differ in terms of a number of attributes such as origin. The choices are framed to closely resemble purchasing scenarios where consumers choose from a set of products, each with different attributes and involves respondents to trade-off several attributes against another (including price). This allows for an estimate of the relative importance and value of the different product attributes to be generated. It also allows for a prediction of consumers' actual market behavior under different scenarios. These scenarios can involve hypothetical future scenarios and comparative scenarios such as having products from origins with different characteristics e.g. distance from a particular locality or land use.

The findings from the research described above will be used to formulate advice to both the primary industries and gas industry on enhancing the market values associated with regional produce, any perceived risks and its protection.

5. Project Inputs

Research

This project will build directly on the findings of project L8. Within this previous project, in-depth surveys were undertaken with 20 participants from 8 localities and approximately 20 different farming sectors (number includes persons with mixed farming businesses). Further discussion ensued as part of the standard GISERA knowledge transfer activities including community and government, with a second session held in Mt Gambier where results from the L8 study were presented to industry representatives together with results from the other SA social and economic projects. As stated above, these previous efforts identified areas for further research including analysis of impacts of resource development, or related community debate on the perceived value of brands. This project has been developed by the same leadership team to address some of the research gaps identified in project L.8.

Resources and collaborations

Researcher	Time Commitment (project as a whole)	Principle area of expertise	Years of experience	Organisation
Neil Huth	24 days	Agricultural systems	>25	CSIRO
Rick Llewellyn	40 days	Agricultural systems	>20	CSIRO
Christina Ratcliff	33 days	Rural land analysis/GIS	>10	CSIRO

Subcontractors (clause 9.5(a)(i))	Time Commitment (project as a whole)	Principle area of expertise	Years of experience	Organisation
Professor Wendy Umberger + Research Assistant	Approx. 30	Food systems and drivers of consumer and producer behaviour	>20	University of Adelaide

Budget Summary

Source of Cash Contributions	2020/21	2021/22	2022/23	% of Contribution	Total
GISERA	\$119,307	\$74,831	\$0	75%	\$194,138
- Federal Government	\$88,510	\$55,515	\$0	55.64%	\$144,025
- SA Government	\$30,797	\$19,316	\$0	19.36%	\$50,113
Total Cash Contributions	\$119,307	\$74,831	\$0	75%	\$194,138
Source of In-Kind Contribution	2020/21	2021/22	2022/23	% of Contribution	Total
CSIRO	\$39,769	\$24,944	\$0	25%	\$64,713
Total In-Kind Contribution	\$39,769	\$24,944	\$0	25%	\$64,713

6. Project Impact Pathway

Activities	Outputs	Short term Outcomes	Long term outcomes	Impact
<p>A team meeting to organise to outline timeframes and staff commitments for each task, and to identify key collaborators and stakeholders</p> <p>Initial engagement with external collaborators and stakeholders as identified during initial project meeting.</p> <p>Sub-contract with collaborating university complete</p>	<p>Short progress report outlining outcomes of project meeting and initial engagements with external collaborators.</p>	<p>Communities effectively communicate concerns.</p> <p>Community awareness about the impacts and opportunities of development is improved.</p>	<p>New knowledge empowers communities to manage current and future issues.</p>	<p>The onshore gas industry operates in a socially, economically, and environmentally sustainable manner</p>
<p>Collate literature and understanding of the value of brand to key local industries, perceived risks to these from resource development</p> <p>Identify techniques to be employed to protect stakeholders from adverse impacts.</p> <p>Human Research Ethics Approvals to be obtained</p>	<p>A short report outlining the literature assembled, brands and impact mechanisms identified for further study, and research methods and processes to be followed</p>	<p>Industry and Government is informed of key issues of affected primary industries.</p>	<p>Reduced public discontent and improved social licence.</p>	
<p>To complete a study as developed during Task 2 with ongoing project management to ensure appropriate protocols are followed.</p>	<p>A short report outlining basic information about the methods used (e.g. technique employed, size of study, demographics and geographical extent, etc as required). Indicative and preliminary results may be provided where appropriate.</p>	<p>New regulatory policies and industry guidelines.</p>	<p>Improved industry practice and decision making to maximise benefits and minimise costs.</p>	
<p>To ensure that the information generated by this project is documented and published after thorough CSIRO Internal review.</p>	<p>A final report documenting project scope, methods and findings.</p>			
<p>To assist knowledge transfer via direct communication and discussion of project results with key external stakeholders.</p>	<p>Knowledge Transfer session communicating results to GISERA stakeholders according to standard GISERA project procedures.</p>			

7. Project Plan

Project Schedule

ID	Activities / Task Title (should match activities in impact pathway section)	Task Leader	Scheduled Start	Scheduled Finish	Predecessor
Task 1	Project Commencement	Neil Huth	Jul-20	Sep-20	-
Task 2	Project Development	Neil Huth	Oct-20	Dec-20	Task 1
Task 3	Project Study	Neil Huth	Jan-21	Jun-21	Task 2
Task 4	Project Reporting	Neil Huth	Jul-21	Dec-21	Task 3
Task 5	Communications and Knowledge Transfer	Neil Huth	Jan-22	Mar-22	Task 4

Task description

Task 1

TASK NAME: Project initiation and scoping

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: July – September 2020

BACKGROUND: This project team includes staff from multiple organisations, disciplines and sites.

This initial phase will involve a significant level of communication in developing a shared vision and understanding of the project background and goals among the research team (including new collaborators). This includes consultation with local industry stakeholders. A subcontract is required to engage a collaborating university researcher for detailed study of possible market impacts and risks.

TASK OBJECTIVES:

- 1) A team meeting to organise project requirements from the various team members, to outline timeframes and staff commitments for each task, and to identify key collaborators and stakeholders for involvement during Task 2.
- 2) Initial engagement with external collaborators and stakeholders as identified during initial project meeting.
- 3) Sub-contract with collaborating university complete.

TASK OUTPUTS AND SPECIFIC DELIVERABLES: Short progress report outlining outcomes of project meeting and initial engagements with external collaborators.

Task 2

TASK NAME: Project Development

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: October – December 2020

BACKGROUND: Study of risks to local brands and methods for managing these will require a good understanding of the key brands for local industry and possible mechanisms for impact on these from resource development. It will also require understanding of methods for studying these in a manner that does not inadvertently increase risk to brands by drawing them into the public debate about local gas development (an issue raised by stakeholders in project L.8). Such techniques exist and are employed in such circumstances. This task will determine the most appropriate qualitative and quantitative approaches for this study and will ensure that all appropriate approval procedures are followed.

TASK OBJECTIVES: To collate literature and understanding of the value of brand to key local industries, perceived risks to these from resource development, and techniques employed on these topics to protect stakeholders from adverse impacts. Most appropriate qualitative and quantitative methodologies identified and specified. Human Research Ethics Approvals to be obtained during this stage where required.

TASK OUTPUTS AND SPECIFIC DELIVERABLES: A short report outlining the literature assembled, brands and impact mechanisms identified for further study, and research methods and processes to be followed.

Task 3

TASK NAME: Project Study

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: January – June 2021

BACKGROUND: An improved understanding of brands, mechanisms for impact and management will require methods that deal with concerns raised by stakeholders about inadvertent risks to brands through involvement in community debate. Methods exist for the control of such risks and careful project development will have been completed during Task 2.

TASK OBJECTIVES: To complete a study as developed during Task 2 with ongoing project management to ensure appropriate protocols are followed.

TASK OUTPUTS AND SPECIFIC DELIVERABLES: A factsheet to be made public providing background to the agriculture, food and wine markets relating to primary production in the region, their value, and the extent and trends relating to regionally branded produce. This will set the context for the previously expressed concerns about market and brand risk and the justification for the focus of the upcoming study. A second brief report will include information about the selected research methods used (e.g. technique employed, size of study, demographics and geographical extent, etc as required).

Task 4

TASK NAME: Project Reporting

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: July – December 2021

BACKGROUND: Information from this project is to be made publicly available after completion of standard CSIRO publication and review processes.

TASK OBJECTIVES: To ensure that the information generated by this project is documented and published after thorough CSIRO Internal review.

TASK OUTPUTS AND SPECIFIC DELIVERABLES: A final report documenting project scope, methods and findings.



Task 5

TASK NAME: Communications and Knowledge Transfer

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: January – March 2022

BACKGROUND: All GISERA projects must complete a knowledge transfer process with key external stakeholders to assist in generating impact from research efforts.

TASK OBJECTIVES: To assist knowledge transfer via direct communication and discussion of project results with key external stakeholders.

TASK OUTPUTS AND SPECIFIC DELIVERABLES: Knowledge Transfer session communicating results to GISERA stakeholders according to standard GISERA project procedures.

Project Gantt Chart

Task	Task Description	Task Leader	2020-21												2021-22									
			Jul-20	Aug-20	Sept-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sept-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	
1	Project Commencement	Neil Huth	█	█	█																			
2	Project Development	Neil Huth				█	█	█																
3	Project Study	Neil Huth							█	█	█	█	█	█										
4	Project Reporting	Neil Huth													█	█	█	█	█	█				
5	Communications and Knowledge Transfer	Neil Huth																			█	█	█	



8. Technical Reference Group

The Technical Reference Group will comprise of technical experts yet to be determined from government, agriculture, viticulture and forestry.

9. Communications Plan

Stakeholder	Objective	Channel (e.g. meetings/media/factsheets)	Timeframe (Before, during at completion)
Primary industries and Dependant Sectors	GISERA seen as trusted source of information by community	One on one and small select group engagement	During
Rural Community / wider public	Demand for GISERA's engagement is maintained as development progresses To communicate project objectives and key messages from the research.	Media, selected meetings Fact sheets (including development of one at commencement of project which will explain in plain English the objective of the project – this will be updated periodically as project progresses). Project progress reported on GISERA website to ensure transparency for all stakeholders including regional communities. Participation in roadshows, community workshops and meetings and other engagements where appropriate.	Near and at Completion From commencement of project and with updates as they come to hand. Periodically As required
Government	Advice provided to senior bureaucrats / ministers / policy makers	Knowledge transfer sessions and through stakeholder workshops and meetings.	At Completion



10. Budget Summary

Expenditure	2020/21	2021/22	2022/23	Total
Labour	\$94,076	\$95,775	\$0	\$189,851
Operating	\$15,000	\$4,000	\$0	\$19,000
Subcontractors	\$50,000	\$0	\$0	\$50,000
Total Expenditure	\$159,076	\$99,775	\$0	\$258,851

Expenditure per Task	2020/21	2021/22	2022/23	Total
Task 1	\$68,905	\$0	\$0	\$68,905
Task 2	\$54,362	\$0	\$0	\$54,362
Task 3	\$35,808	\$0	\$0	\$35,808
Task 4	\$0	\$52,316	\$0	\$52,316
Task 5	\$0	\$47,460	\$0	\$47,460
Total Expenditure	\$159,076	\$99,775	\$0	\$258,851

Source of Cash Contributions	2020/21	2021/22	2022/23	Total
Federal Government (55.64%)	\$88,510	\$55,515	\$0	\$144,025
SA Government (19.36%)	\$30,797	\$19,316	\$0	\$50,113
Total Cash Contributions	\$119,307	\$74,831	\$0	\$194,138

In-Kind Contributions	2020/21	2021/22	2022/23	Total
CSIRO (25%)	\$39,769	\$24,944	\$0	\$64,713
Total In-Kind Contributions	\$39,769	\$24,944	\$0	\$64,713

	Total funding over all years	Percentage of Total Budget
Federal Government Investment	\$144,025	55.64%
SA Government Investment	\$50,113	19.36%
CSIRO Investment	\$64,713	25%
TOTAL	\$258,851	100%



Task	Milestone Number	Milestone Description	Funded by	Start Date (mm-yy)	Delivery Date (mm-yy)	Fiscal Year Completed	Payment \$ (excluding CSIRO contribution)
Task 1	1.1	Project Commencement	GISERA	Jul-20	Sep-20	2020/21	\$51,679
Task 2	2.1	Project Development	GISERA	Oct-20	Dec-20	2020/21	\$40,772
Task 3	3.1	Project Study	GISERA	Jan-21	Jun-21	2020/21	\$26,856
Task 4	4.1	Project Reporting	GISERA	Jul-21	Dec-21	2021/22	\$39,237
Task 5	5.1	Communications and Knowledge Transfer	GISERA	Jan-22	Mar-22	2021/22	\$35,595

11. Intellectual Property and Confidentiality

Background IP (clause 11.1, 11.2)	Party	Description of Background IP	Restrictions on use (if any)	Value
				\$
				\$
Ownership of Non-Derivative IP (clause 12.3)	CSIRO			
Confidentiality of Project Results (clause 15.6)	Project Results are not confidential.			
Additional Commercialisation requirements (clause 13.1)	Not Applicable			
Distribution of Commercialisation Income (clause 13.4)	Not Applicable			
Commercialisation Interest (clause 1.1)	Party	Commercialisation Interest		
	CSIRO	Not Applicable		
	Other	Not Applicable		

12. References

- Regional Development Australia Limestone Coast - Regional Roadmap (2017-2020)
<https://www.rdalc.org.au/wp-content/uploads/2018/02/RDALC-Road-Map-2017-2020-FINAL.pdf>).
- Huth, N, Llewellyn, R., Kuehne, G., Thomas, M., Ratcliff, C., and Bramley, R. (2019) Understanding natural gas impacts and opportunities on agriculture in the South East of South Australia. CSIRO, Australia.
<https://gisera.csiro.au/wp-content/uploads/2019/12/Gas-impacts-and-opportunities-on-agriculture-in-south-east-South-Aust-final-report.pdf>
- C.J. Moran, D. Breeton (2013) The use of aggregate complaints data as an indicator of cumulative social impacts of mining: A case study from the Hunter valley, NSW, Australia
<https://www.sciencedirect.com/science/article/pii/S0301420713000226>
- L. Emilio Morales, Garry Griffith, Victor Wright, Euan Fleming, Wendy Umberger, Nam Hoang (2013) Variables affecting the propensity to buy branded beef among groups of Australian beef buyers. Meat Science <https://doi.org/10.1016/j.meatsci.2013.02.005>
- Loureiro, M.L. and W.J. Umberger. 2007. A Choice Experiment Model for Beef: What US Consumer Responses Tell Us About Relative Preferences for Food Safety, Country-of-Origin Labeling and Traceability. Food Policy. 32:496-514.
<https://www.sciencedirect.com/science/article/pii/S030691920600114X>