Project Order
Proforma 2015

1. Short Project Title (less than 15 words)

Telling the story

Long Project Title	Collating agricultural and socio-economic research into clear messages for landholders and townspeople.
GISERA Project Number	A6
Proposed Start Date	1 November 2015
Proposed End Date	30 September 2016
Project Leader	Neil Huth

2. GISERA Research Program

☐ Biodiversity Research	☐ Marine Research	☒ Land Research
☐ Water Research	☐ Social & Economic Research	☐ GHG Research

3. Research Leader, Title and Organisation
(Include time commitment to project by the Research Leader)

Dr Neil Huth
Senior Research Scientist
Integrated Agricultural Systems
CSIRO Agriculture
Proposed Time allocation: 30 days

4. Summary (less than 300 words)

GISERA phase one has seen a large amount of research work undertaken on a variety of topics and community members are keen to consume this information. However, discussions at several agricultural research forums have raised the problem that farmers feel that they do not have sufficient time to collate and interpret the large volume of information they receive from industry, community and research groups. They have been requesting that a means of packaging and communicating relevant and useful information be developed.

This project will address this by developing a means of telling the story of changes in towns and agricultural areas before CSG and during the development and production phases. This message will be assisted through the development of a detailed landscape change map and a series of communication tools that will be used at some local shows or community events. This community engagement will also be used to gather feedback on our research to date, including its strengths and information gaps. The project will provide a final report or other publication that provides the summary of our research in a user-friendly manner.

5. Budget Summary (From Excel Budget Pack worksheet "Project Plan Summary")

Expenditure	2011/12 Year 1	2012/13 Year 2	2013/14 Year 3	2014/15 Year 4	2015/16 Year 5	2016/17 Year 6	2017/18 Year 7	Total
Labour					170,127	83,597		253,724
Operating					78,500			78,500
Total Costs					248,627	83,597		332,224
CSIRO					248,627	83,597		332,224
Total Expenditure					248,627	83,597		332,224

Expenditure per Task	2011/12 Year 1	2012/13 Year 2	2013/14 Year 3	2014/15 Year 4	2015/16 Year 5	2016/17 Year 6	2017/18 Year 7	Total
Task 1					173,927			173,927
Task 2					68,700			68,700
Task 3					6,000	83,597		89,597
Task 4								
Task 5								
Total Expenditure					248,627	83,597		332,224

Cash Funds to Project Partners	2011/12 Year 1	2012/13 Year 2	2013/14 Year 3	2014/15 Year 4	2015/16 Year 5	2016/17 Year 6	2017/18 Year 7	Total
CSIRO					154,851	55,149		210,000
Sub Total					154,851	55,149		210,000
Total Cash to Partners					154,851	55,149		210,000

Source of Cash Contributions	2011/12 Year 1	2012/13 Year 2	2013/14 Year 3	2014/15 Year 4	2015/16 Year 5	2016/17 Year 6	2017/18 Year 7	Total
GISERA					154,851	55,149		210,000
Total Cash Contributions					154,851	55,149		210,000

In-Kind Contribution from Partners	2011/12 Year 1	2012/13 Year 2	2013/14 Year 3	2014/15 Year 4	2015/16 Year 5	2016/17 Year 6	2017/18 Year 7	Total
CSIRO					93,776	28,448		122,224
Total In-Kind Contribution from Partners					93,776	28,448		122,224

	Total funding over all years	Percentage of Total Budget
GISERA Investment	210,000	63%
CSIRO Investment	122,224	37%
Total Other Investment		
TOTAL	332,224	100%

Task	Milestone Number	Milestone Description	Funded by	Participant Recipient	Start Date (mm-yy)	Delivery Date (mm-yy)	Fiscal Year	Fiscal Quarter	Payment $
Task 1	1.1	Commence Engagement and Collation of airborne survey data	GISERA	CSIRO	Nov-15	Dec-15	2015-16		$51,617
Task 2	2.1	Generation of landscape change maps	GISERA	CSIRO	Jan-16	Mar-16	2015-16		$51,617
Task 3	3.1	Public engagement	GISERA	CSIRO	Apr-16	Jun-16	2015-16		$51,617
Task 4	4.1	Draft Report/Publication	GISERA	CSIRO	Jul-16	Sept-16	2016-17		$55,149

6. Other Researchers (include organisations)

Researcher	Time Commitment (project as a whole)	Principle area of expertise	Years of experience	Organisation
Dr Andrea Walton	35 days	Socio-Economic Research	>10	CSIRO
Dr Peter Caccetta	15 days	Terrestrial Mapping and Monitoring	>20	CSIRO
Dr Xiaoliang Wu	15 days	Terrestrial Mapping and Monitoring	>20	CSIRO
Dr Simon Collings	10 days	Image processing	>10	CSIRO
Dr Drew Devereux	10 days	Photogrammetric methods	>5	CSIRO
Brett Cocks	26 days	CSG and Farmer engagement	>15	CSIRO
Perry Poulton	25 days	GIS and Farming Systems	>25	CSIRO
Ainsleigh Wixon	14 days	Project Support	>3	CSIRO

7. GISERA Objectives Addressed

Carrying out of research and improving and extending knowledge of social and environmental impacts and opportunities of CSG-LNG projects for the benefit of the CSG-LNG industry, the relevant community and the broader public.

8. Program Outcomes Achieved
Details are provided in *Section 13. Project Objectives and Outputs.*

9. Program Outputs Achieved
Details are provided in *Section 13. Project Objectives and Outputs.*

10. What is the knowledge gap that these research outputs will address?

- A coherent synthesis of existing research in a form suitable for public consumption that describes rural change through the various phases of CSG development.

- An assessment of any strengths and knowledge gaps within this research by researchers and the community.

- Evaluation of photogrammetric techniques to demonstrate changes over time for the CSG industry and the general public.

11. How will these Research outputs and outcomes be used by farmers or the CSG-LNG industry?
The main research output will be information about the existing and emerging GISERA research findings presented in a format suitable for the general public. Recent science reviews and community forums have highlighted the problems of information transfer. For example, farmers are keen to learn about research findings but are also cognoscente that they are time poor and struggling to grasp all information set before them. Furthermore, scientific publications are not always presented in form suitable for broad consumption. This project aims to assist existing research to be used by farmers, townspeople and relevant stakeholders.

12. Project Development

GISERA Phase one has seen some really amazing research during a very interesting period of history for the Surat Basin. There is now a wide body of research and information on a broad range of topics. CSG development will continue to expand into new areas where the lessons of this research will be of great importance. It is imperative that these lessons be synthesised into a coherent story of development in the rural areas of the Surat and the findings of research undertaken during this period. It is also important to gather feedback on our telling of this story. This feedback will provide valuable information on our research and on any important issues that remain as information gaps.

The recent review of GISERA priorities reinforced the need for such an effort with several comments including the following requirements and concepts:
- "baseline monitoring & public access to data"
- "Make results easily available, easy to read and meaningful"
- "current projects are fragmented"
- "ensure the GISERA voice gets traction"
- "time series research in all the domains is very important, including getting base line measures"

Furthermore, engagement with farmers (Project 2 – A Shared Space) specifically asked stakeholders about preferred means of information transfer and they were clear that they felt that it was important that they had access to the information for them to then use given the ongoing changes in the broader community and CSG companies. However, recent community forums have provided further feedback from landholders that they are struggling to deal with the amount of information that is being generated by industry, community and research groups. The community is asking researchers to find a way to present their information in a way that is accessible and useable without being "dumbed down".

We propose a project that brings scientists across the Agricultural and Socio-economic areas to synthesise our work into a coherent story for people in the rural areas of the Surat. The story should contain information on the state of the area before CSG, during the development phase, and now during the production phase. It should paint a picture of what happened in the towns, and on the farms. It should not only bring information into one source, but draw together themes across the research projects to make it coherent (e.g. how did changes in the town affect people on the land?). This story will then be presented to people as a showcase of GISERA's research efforts and as a way of getting our information into the local communities. We plan to present the information, face-to-face, at local agricultural shows. We would present the research, our publications, our people. We would also use these interactions to gather feedback on our science in terms of its utility and relevance. We tell the story, but we also listen.

Phase 1 of the GISERA projects has accumulated some detailed imagery of the Chinchilla-Miles area during the construction phase. Historical aerial imagery has also been collated for that

area. We propose to update this with a future aerial survey to show the landscape after development. From these datasets, it may be possible to create a time series of 3D virtual landscapes which we would allow people to navigate and explore interactively at the local shows. The imagery will show historical agricultural developments, and the recent changes brought about by CSG. Experience tells us that these pictures help engagement with farmers. Spatial analysis of the changes in land use (e.g. the emergence of the new irrigation districts) will also be presented graphically.

The story of socio-economic change will be developed using the existing research results but can also make use of data from the repeated community wellbeing survey and other phase 2 work currently proposed for completion early next year. A socio-economic researcher will also lead the feedback and evaluation component of our interactions at the local shows. It is hoped that the interactions will be two-way in nature, resulting in increased understanding of the issues by researchers. Involvement of other research teams in the shows would be encouraged if stakeholder engagement would benefit their projects. This project can be a vehicle for impact by other teams.

The local agricultural shows run during April and May. Feedback from surveys and informal discussions would need to be incorporated into a final publication seeking to tell the story. A short report to GISERA about local feedback would be provided as a secondary output. A draft final report or informative publication would be provided during the second half of 2016.

13. Project Objectives and Outputs

This project will
- Provide feedback from members of the community on the strengths and research gaps in existing GISERA research portfolios.
- Detailed spatial imagery showing landscape changes during recent CSG developments within a large area surveyed during a previous project.
- Improved understanding of changes on farms and in towns during CSG development
- Improved awareness of GISERA research

Outputs include:
- Results of a community survey of GISERA research
- A publication that seeks to present the large body of GISERA research in a concise but informative manner
- Tools for use in future community engagement

14. Project Plan

14.1 Project Schedule

ID	Task Title	Task Leader	Scheduled Start	Scheduled Finish	Predecessor
Task 1	Commence Engagement and Collation of airborne survey data	Neil Huth	01-11-2015	31-12-2015	-
Task 2	Generation of landscape change maps and commence story pieces.	Neil Huth	01-01-2016	31-03-2016	Task 2
Task 3	Public engagement	Neil Huth	01-04-2016	30-06-2016	Task 3
Task 4	Draft Report/Publication	Neil Huth	01-07-2016	30-09-2016	Task 4

TASK 1

TASK NAME: **Commence Engagement and** Collation of airborne survey data

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 31-12-2015

BACKGROUND: One of the objectives of this project is to generate detailed maps of landscape change to assist in communicating changes that occur during CSG development. This will require flying an updated survey of the area undertaken during the "Making Tracks" project. Historical imagery will also be collated for the area to show the longer term landscape changes that were already underway before the onset of CSG development.

TASK OBJECTIVES: 1) To undertake an updated photographic survey of the Chinchilla-Miles-Condamine area and to collate historical imagery of the area, 2) To engage with industry bodies (such as Gasfields Commission and Agforce) to outline the project and exchange ideas.

TASK OUTPUTS & SPECIFIC DELIVERABLES: A brief report describing progress on photographic survey and obtaining historical imagery and initial engagement with relevant industry bodies.

TASK 2

TASK NAME: Generation of landscape change maps and commence story pieces.

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 31-03-2016

BACKGROUND: Generation of detailed maps of landscape change requires the processing of large amounts of data through a series of complex analytical processes. This can will take several weeks using high performance computing facilities. Feedback from research and industry people working on issues of landscape change (e.g. rehabilitation, revegetation) will be sought. Story

pieces (fact sheets, posters, imagery) will be created from previously published reports and the newly generated change maps. These communication devices will follow standard CSIRO/GISERA publication review and approval protocols and will be provided to GISERA partners.

TASK OBJECTIVE: To produce detailed maps of landscape change including changes in visible features, ground surface elevation and water flow.

TASK OUTPUTS & SPECIFIC DELIVERABLES: A short report describing 1) progress in generating the maps and some demonstration of the resulting dataset (including rehabilitation and revegetation where possible), and 2) a list of story pieces complete and under development.

TASK 3

TASK NAME: Community Engagement

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 30-06-2016

BACKGROUND: The community has asked for research to be collated and communicated in a more suitable manner. This will be attempted firstly through the presentation of our research at a series of community events.

TASK OBJECTIVE: To communicate GISERA research through face-to-face meetings with people at local shows or community events and to gather feedback on this.

TASK OUTPUTS & SPECIFIC DELIVERABLES: A short report describing 1) the engagement processes and some preliminary lessons arising from these, and 2) a complete list of story pieces developed within the project.

TASK 4

TASK NAME: Final Report

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 30-09-2016

BACKGROUND: Development of the coherent research story and community engagement should be complete and feedback from the public collected.

TASK OBJECTIVES: 1) To document the GISERA research story in a meaningful and useful way and to document public perceptions about the strengths and gaps in our research, 2) Present report findings to relevant industry bodies.

TASK OUTPUTS & SPECIFIC DELIVERABLES: 1) A draft report/publication documenting the research story and pulling all the story pieces into one communication,2) a second short report outlining the results of the community feedback and 3) a short report outlining process of communicating the report to industry groups.

15. Budget Justification

The budget for this project has been approved by GISERA's Research Advisory Committee and Management Committee.

The project leader is an experience member of the GISERA agricultural land management team, he is locally-based, and has assembled a broad team to assist in the various aspects of the project.

16. Project Governance

Progress against project milestones and tasks (specified in item 14) will be assessed regularly as part of GISERA's general research portfolio management.

17. Communications Plan

General communication will be managed by GISERA.

Project outputs will be made available on the GISERA website and, where possible, be communicated through the various GISERA communications forums. Furthermore, the project involves a significant communications component.

18. Risks

Capacity to deliver: The project leader has sufficient experience to lead and supervise the various activities and ascertain the research outcomes. Close links with the various GISERA Land Management and socio-economic companion projects will provide extra support. Staff departure could pose a risk to some project operations, but many tasks can be fulfilled by other staff.

In projects of short duration the risk of adverse weather conditions on field work is heightened. The aerial survey needs to be completed before the end of the 2015 calendar year.

Project Management: The project team includes several experienced project leaders and so risks to project management are low.