

Project Order

Proforma 2011

1. Short Project Title (less than 15 words)

Project 2 - A shared space

Long Project Title	A study into how CSG and agriculture can operate in a shared space: costs, benefits, threats and opportunities.
GISERA Project Number	A2 1213
Proposed Start Date	July 2012
Proposed End Date	June 2013
Project Leader	Neil Huth

2. GISERA Research Program

- Biodiversity Research
 Marine Research
 Land Research
 Water Research
 Social & Economic Research

3. Research Leader, Title and Organisation

Neil Huth
Senior Research Scientist
CSIRO Ecosystem Sciences

4. Summary (less than 300 words)

Gas-farm development may require a greater level of 'sharing' than other examples of land use change or mixed farming enterprise development. Elements of each enterprise will become intrinsically intermingled in the same space. Furthermore, this space is often already more than just the location of a farm enterprise; it is the home of a farming family. The development of mixed enterprise gas-farms will bring costs and benefits to gas

companies, farm companies and farm families. This project will quantify, in various monetary and non-monetary terms, such costs and benefits.

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

Expenditure	2012/13 Year 1	2013/14 Year 2	2014/15 Year 3	2015/16 Year 4	2016/17 Year 5	Total
Labour	124,445					124,445
Operating	16,000					16,000
Total Costs	140,445					140,445
CSIRO	140,445					140,445
Total Expenditure	140,445					140,445

Expenditure per Task	2012/13 Year 1	2013/14 Year 2	2014/15 Year 3	2015/16 Year 4	2016/17 Year 5	Total
Task 1	140,445					140,445
Task 2						
Task 3						
Task 4						
Task 5						
Total Expenditure	140,445					140,445

Cash Funds to Project Partners	2012/13 Year 1	2013/14 Year 2	2014/15 Year 3	2015/16 Year 4	2016/17 Year 5	Total
CSIRO	105,320					105,320
Total Cash to Partners	105,320					105,320

Source of Cash Contributions	2012/13 Year 1	2013/14 Year 2	2014/15 Year 3	2015/16 Year 4	2016/17 Year 5	Total
Australia Pacific LNG	105,320					105,320
Total Cash Contributions	105,320					105,320

In-Kind Contribution from Partners	2012/13 Year 1	2013/14 Year 2	2014/15 Year 3	2015/16 Year 4	2016/17 Year 5	Total
CSIRO	35,125					35,125



Total In-Kind Contribution from Partners	35,125					35,125
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	Total funding over all years	Percentage of Total Budget
Australia Pacific LNG Investment	105,320	75%
CSIRO Investment	35,125	25%
Total Other Investment		
TOTAL	140,445	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	Initial Team Meeting and Literature Review.	GISERA	CSIRO	1.7.2012	30.9.2012	12/13	1 st	26,330
Task 1	2.1	Surveys and Case Studies of farm and CSG stakeholder groups	GISERA	CSIRO	1.10.2012	31.12.2012	12/13	2 nd	26,330
Task 1	3.1	Team Meeting and Synthesis of Results	GISERA	CSIRO	31.12.2012	31.3.2013	12/13	3 rd	26,330
Task 1	4.1	Publication of results	GISERA	CSIRO	31.3.2013	31.6.2013	12/13	4 th	26,330

6. Other Researchers (include organisations)

Researcher	Time Commitment (project as a whole)	Principle area of expertise	Years of experience	Organisation
Neil Huth	0.1FTE	Farming Systems Research, Modelling, Trade-off Analysis	>20	CSIRO
Neal Dalglish	0.1FTE	Farming Systems Research, Farmer Engagement, Farmer education	>30	CSIRO
Perry Poulton	0.1FTE	Farming Systems, Modelling, Farmer Engagement	>20	CSIRO
Oswald Marinoni	0.1FTE	Spatial analysis and modelling of geo-data, Informing land management decision processes	>15	CSIRO

7. GISERA Objectives Addressed

Research that improves and extends knowledge of environmental impacts and opportunities of CSG-LNG projects, enabling the CSG-LNG industry to better meet the expectations of relevant communities and the broader public.

Informing government, regulators and policy-makers on key issues regarding policy and legislative framework for the CSG-LNG industry.

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?

The research outputs derived from this project will:

- document current CSG industry and farmer perceptions of costs and benefits of shared gas/farm systems
- document value systems underlying these perceptions
- estimate a range of key costs and benefits for comparison.

The research outputs will provide key knowledge and direction for subsequent research projects within the agricultural land management portfolio.

11. How will these Research outputs and outcomes be used by farmers or the CSG-LNG industry?

Research outputs will help to quantitatively and qualitatively inform farmers, CSG staff, government, scientists and the general community of the main issues facing the development of a shared CSG/farming landscape. Involvement of both farm and CSG professionals in the discussions will ensure that information is quickly shared amongst the various participants. The analysis will influence the direction of future work in the land management research portfolio, and is likely to be of considerable public interest.

12. Project Development (1 page max.)

The project was developed in consultation between APLNG and CSIRO staff. The proposed activity was discussed with members of various farmer/stakeholder groups and was endorsed as an important research need.

Much current public discussion arises from uncertainty within the farming community regarding the likely impacts and opportunities brought about by CSG development on farming land. These impacts are likely to differ between various types of farming enterprise (grazing, dry land cropping, irrigated cropping, mixed farming). This project will seek to identify and quantify costs and benefits where possible, and to identify

knowledge gaps where uncertainty may remain. This will influence the research agenda of other GISERA land management projects.

The work builds strongly on past and ongoing research activities of the project team in farming systems research based upon strong stakeholder engagement. Team members are currently involved on cross-disciplinary studies at the farm level in Australia, Asia and Africa. Such a farming “systems focus” will assist in the clear separation and analysis of issues within a shared space.

13. Project Objectives and Outputs

This project aims to provide insight into the costs and benefits of shared gas-farm systems through the eyes of farmers and gas industry professionals. Publication of the results from this project will provide the first synthesis of these issues within the scientific and mainstream literature. These insights will also inform decisions and directions in subsequent research projects, in particular the *Gas-Farm Design* project. The project will use a series of on-farm case studies and on-farm discussions to understand the value attributed to aspects of the shared system. A range of values identified by farmers will be collated from the case study discussions and methods sought for their evaluation. Formal economic costing will be applied where possible. However, just as importantly, the perceptions behind attributed values will also be explored. It is anticipated that there will be large differences in the values systems for farmers in irrigated cropping or dry land cropping and graziers. Landholders from a range of enterprises will therefore be included.

The key objective of this project is to develop a good understanding of the issues facing farmers and CSG staff within a shared gas/farming system including costs, benefits, threats and opportunities. The project will develop understanding, farm and industry linkages, and identify knowledge gaps that will feed into the larger assessments addressed by *Project 1, Project 3 and Project 4*.

Outputs include:

- Syntheses of costs and benefits of shared gas-farming systems.
- Surveys of the important issues facing those operating in shared Gas-Farming systems. These surveys will include representatives from different farmer stakeholder groups, farmers operating a range of farm enterprise types, and CSG staff operating in different industry roles.
- An analysis of these issues, including the various value systems underlying various perceptions or beliefs.
- A publication documenting the findings of the surveys, including a list of existing knowledge gaps

14. Project Plan

14.1 Project Schedule

ID	Task Title	Task Leader	Scheduled Start	Scheduled Finish	Predecessor
Task 1	Initial Team Meeting and Literature Review	Neil Huth	1.7.2012	30.9.2012	
Task 2	Surveys and Case Studies of farm and CSG stakeholder groups	Neil Huth	1.10.2012	31.12.2012	Task 1
Task 3	Team Meeting and Synthesis of Results	Neil Huth	31.12.2012	31.3.2013	Task 2
Task 4	Publication of results	Neil Huth	31.3.2013	31.6.2013	Task 3

Task 1.

TASK NAME: Initial team meeting and literature review

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 2012/13

TASK OBJECTIVES:

- Establish project team
- Gather background information for methodology and future publications
- Develop methodology for stakeholder surveys and their analysis
- Refine work plan according to stakeholder discussions

SPECIFIC DELIVERABLE: A document detailing relevant findings or methodologies from previous studies within the scientific literature.

Task 2.

TASK NAME: Surveys and case studies of farm and CSG stakeholder groups

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 2012/13

BACKGROUND: The project team has a long history of engaging with farmers to better understand farming systems. This work often employs surveys, discussion groups, or “kitchen table” sessions to capture information.

TASK OBJECTIVE: Gather relevant information to provide a good understanding of the costs and benefits of shared gas/farming systems, using a stratified sample of agricultural production systems.

TASK OUTPUTS: A variety of surveys, discussions and datasets on relevant issues.

SPECIFIC DELIVERABLE: Data in various forms for synthesis into a report into costs and benefits of shared gas/farming systems, for a range of enterprise types.

Task 3.

TASK NAME: Team meeting and synthesis of results

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 2012/13

BACKGROUND: The previous task provided for the collation of data from a wide range of subjects. This data will need to be synthesised into a coherent form and analysed for key results.

TASK OBJECTIVE: To, as a team, collate the results of surveys, case studies and data gathering into a coherent synthesis.

SPECIFIC DELIVERABLE: A team meeting, with relevant data analysed, discussed and interpreted. A brief report summarising findings.

Task 4.

TASK NAME: Publication of results

TASK LEADER: Neil Huth

OVERALL TIMEFRAME: 2012/13

BACKGROUND: Analysis of results should be mostly complete by Task 3. Results should be properly documented and communicated via scientific publication. Important points can be taken from this resulting document for communication via GISERA communication processes.

TASK OUTPUTS & SPECIFIC DELIVERABLES: A publication prepared for the scientific literature (journal and/or conference proceedings).

15. Budget Justification

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

16. Project Governance

Project management tasks and dissemination activities are specified in *Section 14 Project Plan*.

17. Communications Plan

General communication will be managed by GISERA.

18. Risks

At this stage no unmanageable risks particular to this project are foreseen.

Capacity to deliver: All project staff have sufficient experience to lead and supervise the various activities and ascertain the research outcomes. Therefore the impact of unplanned key staff departure is low and can be mitigated.

There are risks inherent with working closely with human research subjects. Though the risks in this project are considered to be low, the project will be managed in accordance with CSIRO Human Research Ethics policies.

19. Intellectual Property and Confidentiality

Background IP (clause 10.1, 10.2)	Party	Description of Background IP	Restrictions on use (if any)	Value
Ownership of Non-Derivative IP (clause 11.3)	CSIRO			
Confidentiality of Project Results (clause 15.6)	Project results are not confidential.			
Additional Commercialisation requirements (clause 12.1)	Not Applicable			
Distribution of Commercialisation Income (clause 1.1)	Not applicable			
Commercialisation Interest (clause 1.1)	Party		Commercialisation Interest	
	Australia Pacific LNG			
	CSIRO			