



Australia's National
Science Agency

GISERA | Gas Industry Social and Environmental Research Alliance

Progress report

Groundwater modelling and predictive analysis to inform CSG
impact assessment, monitoring and management



Progress against project milestones

Progress against milestones/tasks are approved by the GISERA Director, acting with authority in accordance with the [GISERA Alliance Agreement](#).

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 is withheld.
- 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 by GISERA Director.

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.

Project schedule table

TASK NUMBER	TASK DESCRIPTION	SCHEDULED START	SCHEDULED FINISH	COMMENT
1	Project inception meeting	Sep-22	Mar-23	Completed
2	Updating, calibrating and prediction analysis including data-worth using Namoi subregional model	Oct-22	Oct-23	
3	Groundwater recharge and discharge	Oct-22	Oct-23	
4	Data assimilation and water balance	Jul-23	Jun-24	
5	Machine Learning methods and application	Sep-23	Jun-24	
6	New groundwater model development	Mar-24	Dec-24	
7	Paired simple and complex model analysis	Jul-24	Jul-25	
8	Interactive dashboard	Jan-23	Mar-25	
9	Student engagement	Sep-22	Jul-25	
10	Project reporting	Sep-22	Jul-25	
11	Communication findings to stakeholders	Full duration of project		

Project schedule report

TASK 1: Project inception and stakeholder meeting

BACKGROUND

Santos Limited, NSW DPIE and the Office of Water are key stakeholders of the project. These stakeholders would be able to provide information about CSG water production rates and times and other valuable data and knowledge regarding the hydrogeological context.

TASK OBJECTIVES

Set the scene for the project, establish contact points with stakeholders, establish the technical reference group and facilitate data provisions.

TASK OUTPUTS AND SPECIFIC DELIVERABLES

Stakeholder meeting completed.

PROGRESS REPORT

Meetings with the stakeholders completed. Meetings were held with relevant stakeholder of the project in Santos (Oct-22, Apr-23) to give an overview of the project and to discuss about data availability from Santos's hydrogeological investigations and timeline of Narrabri Gas Project. Meeting was also held with the relevant stakeholders in the Water Division of NSW DPE to present an overview of the project, timeline

and relevant data provisions. Contact points have been established to communicate during the course of the project.

Variations to Project Order

Changes to research Project Orders are approved by the GISERA Director, acting with authority, in accordance with the [GISERA Alliance Agreement](#). Any variations above the GISERA Director’s delegation require the approval of the relevant GISERA Research Advisory Committee.

The table below details variations to research Project Order.

Register of changes to Research Project Order

DATE	ISSUE	ACTION	AUTHORISATION

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GISERA is a collaboration between CSIRO, Commonwealth and state governments and industry established to undertake publicly-reported independent research. The purpose of GISERA is to provide quality assured scientific research and information to communities living in gas development regions focusing on social and environmental topics including: groundwater and surface water, greenhouse gas emissions, biodiversity, land management, the marine environment, and socio-economic impacts. The governance structure for GISERA is designed to provide for and protect research independence and transparency of research.