



Australia's National  
Science Agency

**GISERA** | Gas Industry Social and Environmental Research Alliance

# Progress report

Methane emissions from CSG water holding ponds in  
Queensland



# 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           | Representative pond selection for survey of methane emissions           | 1 Aug 2023                 | 30 Apr 2024                | This task will be completed mid-June 2024. |
| 2           | Sampling logistics and field campaign planning                          | 1 Apr 2024                 | 30 Jun 2024                |  |
| 3           | Field trips I and II – Methane emissions measurement and water sampling | 1 Jun 2024 and 31 Dec 2024 | 1 Jul 2024 and 31 Jan 2025 |  |
| 4           | Coordination between CSG holding pond projects                          | 1 Aug 2023                 | 30 Oct 2025                |  |
| 5           | Project reporting   | 1 Aug 2023                 | 30 Oct 2025                |  |
| 6           | Communicate findings to stakeholders                                    | 1 Aug 2023                 | 30 Oct 2025                |  |

## Project schedule report

### TASK 1: Representative pond selection for survey of methane emissions

#### BACKGROUND

The GISERA phase 1 project ‘Methane contributions from CSG water holding ponds’ literature review showed that CSG holding ponds are a potentially significant source of methane emissions, however, there is a high level of uncertainty as to the quantity of methane emitted from these holding ponds in Queensland. Identifying representative CSG holding ponds from the Surat Basin for evaluating the methane emissions is critical. Selection of representative ponds will be based on a number of criteria including accessibility, type of held water, pond size, water chemistry, and location.

#### TASK OBJECTIVES

This task is to identify the representative CSG holding ponds from the Surat Basin for future evaluation of ebullitive methane emissions and dissolved methane concentrations in the field campaign. The project team will liaise with CSG companies operating in the Surat Basin to obtain information on the properties and accessibility of the CSG ponds. Dependent on accessibility, the pond selection will cover both produced water ponds and brine ponds, attempting to encompass the range of properties such as location, pond size and water chemistry represented in CSG ponds across the Surat Basin.

1. Liaise with representatives from CSG companies to assist with pond selection and further sampling campaign.

2. Select representative CSG holding ponds in the Surat Basin based on accessibility, type of held water, pond size, water chemistry, and location.
3. Identify the requirements for permission to access and sample the selected ponds.

#### TASK OUTPUTS AND SPECIFIC DELIVERABLES

Identify up to twenty CSG holding ponds in the Surat Basin for direct methane emission measurements and produce a document describing contacts, sampling site accessibility and relevant permission requirements.

#### PROGRESS REPORT

This milestone is partially completed.

The project team have identified approximately 10-15 representative ponds in the Surat Basin that will be accessed for evaluation of methane emissions during the field trips. These currently include in-field produced water holding ponds, treatment plant feeder ponds, effluent ponds, and brine ponds. To do this the team have established contacts working in the companies that operate the majority of the CSG activities in the Surat Basin. The project team have liaised with contacts from the two largest operators in the Surat Basin and have visited the ponds where they have evaluated sampling site accessibility and HSE permissions required for the field work. Currently further discussion with CSG operators is taking place to arrange access to additional ponds to expand the overall total that will be measured in the field trips.

## 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.