



GISERA | Gas Industry Social and Environmental Research Alliance

**Minutes of the NT Research Advisory Committee Meeting No. 7
held in Darwin on Wednesday, 27 April 2022**

OPENING

The meeting of the CSIRO GISERA NT Research Advisory Committee (RAC) was called to order at 9.04 am (ACST) on Wednesday, 27 April 2022.

PRESENT

Damian Barrett: GISERA Director (CSIRO)
Greg McDonald: Branch Manager – Resources & Energy (Northern Land Council)
Julie-Ann Stoll: Independent Representative retired, formerly Central Land Council
Daniel Capps: Industry Liaison Officer (Northern Territory Cattlemen's Association)
James Pratt: Senior Executive Director- Energy Development (NT DITT)
Joshua Gilroy: Principal Environment Adviser (Santos)

Via Webex

Matt Kernke: Environmental Approvals Lead-Growth Assets (Origin)

Other participants:

Cameron Huddlestone-Holmes: GISERA NT State Leader (CSIRO)
Jizelle Khoury: GISERA Executive Officer (CSIRO)
Tsuey Cham: GISERA Communication & Stakeholder Engagement Leader (CSIRO)
Melina Gillespie: GISERA Communication & Engagement Advisor (CSIRO)

Apologies:

Greg Ireland: Chief Executive Officer (Chamber of Commerce Northern Territory)
Simone Cameron: Director of Regions and Projects (Northern Territory Farmers Association)

1. WELCOME, APOLOGIES AND ADOPTION OF AGENDA

The GISERA Director welcomed all members to the meeting. The agenda was unanimously approved as distributed. Apologies were received from Greg Ireland and Simone Cameron.

The importance of all operators in the Beetaloo being involved in GISERA and the research conducted in the region was noted.

2. GISERA COMMUNICATIONS

Following execution of new Alliance Agreement and Commonwealth Grant, CSIRO has appointed 3 full-time staff to focus on GISERA communications and engagement including:

- an overhaul of the GISERA website for improved user experience and easier navigation (website now live).
- the planning for community webcasts to showcase projects over last 10 years (from June 2022)
- the development of interactive communication products to showcase projects (June/July 2022).
- digital interactive products to convey simple science concepts of geology and hydrogeology of basins (June/July 2022).

There was discussion on possible pathways for enhanced aboriginal engagement including consideration of webcast translation into indigenous languages. This idea and other options will be explored by the communication team.

RAC members were encouraged to forward on community webcast invitations to community networks and colleagues.

CSIRO has also appointed a Senior Research Consultant, Indigenous Science and Knowledge - Community Engagement and Information Program who will be based in Darwin to look after the Aboriginal Information Program which was a key recommendation in the Pepper Inquiry.

Tsuey Cham and Melina Gillespie left the meeting at 9.43 am (ACST).

ITEMS FOR DISCUSSION

3. ACTIONS FROM PREVIOUS MEETING

Action 4 (10-06-21 Item 4) has been closed.

Action 5 (10-06-21 Item 4) will remain open until data becomes available.

4. PROJECT PROPOSAL

Examination of stygofauna ecosystems of the Beetaloo Sub-basin

The GISERA Director provided a summary of the project proposal.

Key points raised:

- Further stygofauna sampling is being undertaken as part of the SREBA and it is important that this proposal takes into account those activities. Some of the project objectives may require refinement to avoid duplication and build on the current work being undertaken.
- The HF Inquiry recommendations listed in the proposal all relate to the SREBA. As the SREBA work program will be completed this year and this project is scheduled for completion in 2024, those recommendations should be removed. This proposed work will not feed into the SREBA program before it is finished but will build on it and the previous GISERA stygofauna project.
- It is understood that the exact number of sampling bores and spatial coverage will be determined during the discovery phase of the project, but it would be useful to include a minimum target number of bores to be sampled as part of task 2.
- It was requested that the term 'well' should be changed to 'bore' to avoid any confusion with a gas well.
- Several discussion points were raised in relation to task 2b where it is proposed to build observation bores:
 - In addition to observing stygofauna, there would be value in using the bores to be drilled for other things e.g. testing water quality or observing flow rates.
 - The budget allocated for task 2b is unlikely to be sufficient as multiple bores are to be drilled. The budget for this task should be increased to \$500K. The predicted number bores to be drilled should be included in the proposal (noting the exact number will be provided to the RAC in the stage gate listed below).
 - In selection locations or bores to be drilled, it will be important to have discussions with industry and NT Government to understand where they are currently drilling to ensure proximity is optimal.
 - Origin Energy offered to provide access to their observation wells to trial drill sites for this research project.
 - Proposal to include a stage gate/decision point back to RAC after drilling locations and costs have been determined and if there is any potential increased scope for sampling in the wide-scale campaign in dry season 2023. The stage gate should be included following the first field campaign in dry season 2022.

- If possible, the proposal should include criteria established for picking the location of the bores to be drilled. If this cannot be determined until discovery phase of project, then the criteria can be included in stage gate.
 - A local company is to be contracted to drill the observation bores. The group NT Industry Capability Network (NTICN) can assist with sourcing a registered company.
 - There are a range of regulatory requirements for drilling bores that the research proponent will need to consider and budget for. The research proponent will also need to obtain an Authorities Certificate from Aboriginal Areas Protection Authority (AAPA) or clearance report from Northern Land Council (NLC). It was noted that AAPA may be more appropriate because this is a small drilling campaign. Some of these requirements may take up to a year so the proponent will need factor into timeframes.
- This research is being conducted in response to community concern so it will be important that community groups/members are presented with the findings by the researchers. The research proponent to include a more targeted communications plan to ‘present findings to community members/groups’. This may include a roadshow, presentation at NTCA branch meeting, to Environmental Defenders Office or Environment Centre.
 - A representative from the Northern Territory Department of Environment, Parks and Water Security (DEPWS) be invited to participate in the project’s Technical Reference Group.

Outcome: The NT RAC would like the research proponent to revise the proposal taking to account all the points raised and reconvene to consider the revised proposal.

Action: The research proponent to meet with DEPWS to better understand current SREBA activities and how it may impact objectives of project.

Action: The research proponent to remove reference to HF Inquiry Recommendations (including in Project Impact Pathway section)

Action: The research proponent to include minimum target of bores to be sampled.

Action: The research proponent to adjust terminology of ‘wells’ to ‘bores’ in Project Order.

Action: The research proponent to consider whether multiple uses of drilled bores is possible.

Action: The research proponent to increase budget of task 2B to \$500K and include predicted number of bores to be drilled.

Action: The research proponent to introduce a decision point/stage gate following the first field campaign to include:

- 1) actual number of bores to be drilled (if it differs from what will be listed in proposal)
- 2) costs for drilling bores
- 3) location of bores
- 4) drilling company proposed
- 5) details of wide-scale sampling campaign

Action: The research proponent to include in proposal the criteria established for picking location of bores to be drilled. Otherwise, include in decision point/stage gate.

Action: The research proponent to contact NT ICN to source registered local drilling company.

Action: The research proponent to factor in regulatory requirements into project timeframes and budget.

Action: Further consideration on how to present findings to community members/groups and include clearly defined activities in proposal.

Action: The research proponent to invite a representative from the NT DEPWS to participate in the project's Technical Reference Group.

5. PROJECT PROPOSAL

Background Seismicity of Beetaloo Sub-basin and Seismic Hazard

The GISERA Director provided a summary of the project proposal.

Key points raised:

- Clarification required on whether the seismic array has already been fully established by Geoscience Australia or whether there were additional seismometers planned. If the array is already fully in place, then in the Methodology section, Stage 1 'assess the sensitivity of the proposed seismic array' may need to change to 'recently installed seismic array'. In the Project Impact Pathways section, the 'Provide input to location of the planned seismic array' will also need to be changed if there are no further seismic stations are planned.
- Clarification required on current number of arrays installed noting that Prior Research section states 'Geoscience Australia is operating six-element seismic array since mid 2021'.
- The HF Inquiry recommendations listed in the proposal should be removed.
- The Project Order should be explicit that:
 - no arrays are included in the budget as they are funded and installed by GA

- the data record obtained since array was established in 2021 will also be looked at
- industry data from HF that is provided to the regulator will be provided by industry to the research proponent
- The task 7 outputs and deliverables on page 15 should include an analysis of the future need of monitoring should production scenarios occur. Given the national interest, this may result in provisions of advice for ongoing monitoring.
- A representative from the NT Department of Industry, Tourism and Trade (DITT) be invited to participate in the project's Technical Reference Group.

Outcome: The NT RAC approved this project, subject to the actions below being addressed to the satisfaction of the GISERA Director.

Action: The research proponent to clarify current number of arrays already installed and whether any further arrays will be installed.

Action: The research proponent to remove reference to HF Inquiry Recommendations.

Action: The research proponent to make explicit that:

- 1) no arrays will be funded in this project
- 2) data from 2021 will also be looked at
- 3) HF industry data will be obtained from the companies
- 4) analysis of future monitoring requirement will be conducted

Action: The research proponent to invite a representative from the NT DITT to participate in the project's Technical Reference Group.

6. PROJECT PROPOSAL

Beetaloo basin shale long-term competency after decommissioning

The GISERA Director provided a summary of the project proposal.

Key points raised:

- OnePetro has 192 peer reviewed papers on Shale Creep. The Project Order will need to make clear what else the literature review proposed will provide.
- The leakage simulator would be useful and should be tested by independent experts in the oil and gas sector who have credentials related to decommissioning and can assess whether all causal factors for leaks have been considered. This independent review may be done by project's Technical Reference Group or via a sub-contractor. This should be made explicit in the proposal and any additional cost should be factored into the project budget.

- An understanding of the formation pressure, permeability, buoyancy and pressure differentials of shale gas wells over their lifecycle is important in determining potential risk of fluid movement (e.g., gas) in decommissioned wells. The leakage simulator modelling must include these factors that could affect the ability of fluids to move along a preferential pathway to the subsurface including the possibility of saline aquifer fluid movement into freshwater aquifers.
- The HF Inquiry recommendations listed in the proposal should be removed.
- The research proponent to include a more targeted communications plan to ‘present findings to community members/groups’.
- A representative from the NT Geological Survey be invited to participate in the project’s Technical Reference Group.

Outcome: The NT RAC approved this project, subject to the actions below being addressed to the satisfaction of the GISERA Director.

Action: The research proponent to make explicit what the literature review will provide in addition to papers already available.

Action: The research proponent to include an independent review of the leakage simulator.

Action: The research proponent to remove reference to HF Inquiry Recommendations.

Action: Further consideration on how to present findings to community members/groups and include clearly defined activities in proposal.

Action: Ensure that the leakage simulator incorporate all physical processes affecting the potential movement of fluids along possible pathways from target gas seams to surface.

Action: The research proponent to invite a representative from the NT Geological Survey to participate in the project’s Technical Reference Group.

7. ASSESSING THE RISKS ASSOCIATED WITH SUBSURFACE WASTEWATER DISPOSAL

The RAC had preliminary discussions on wastewater management.

ITEMS FOR NOTING OR DISCUSSION BY EXCEPTION

8. OTHER BUSINESS

Key points raised:

- A summary sheet providing GISERA NT project's status will be emailed to the RAC.
- Opportunities to engage with the NLC's Cultural Monitor Program during field campaigns was encouraged.

NEXT MEETING

The next meeting of the NT Research Advisory Committee will be scheduled once the Stygofauna proposal has been revised.

MEETING CLOSE

The meeting closed at 2.32 pm (ACST).

SUMMARY OF ACTIONS FROM GISERA NT RAC MEETING #7 – 27 APRIL 2022

Agenda Item	Action
27-04-22 Item 4	The research proponent to meet with DEPWS to better understand current SREBA activities and how it may impact objectives of project.
27-04-22 Item 4	The research proponent to remove reference to HF Inquiry Recommendations (including in Project Impact Pathway section)
27-04-22 Item 4	The research proponent to include minimum target of bores to be sampled.
27-04-22 Item 4	The research proponent to adjust terminology of ‘wells’ to ‘bores’ in Project Order.
27-04-22 Item 4	The research proponent to consider whether multiple uses of drilled bores is possible.
27-04-22 Item 4	The research proponent to increase budget of task 2B to \$500K and include predicted number of bores to be drilled.
27-04-22 Item 4	<p>The research proponent to introduce a decision point/stage gate following the first field campaign to include:</p> <ol style="list-style-type: none"> 1) actual number of bores to be drilled (if it differs from what will be listed in proposal) 2) costs for drilling bores 3) location of bores 4) drilling company proposed 5) details of wide-scale sampling campaign
27-04-22 Item 4	The research proponent to include in proposal the criteria established for picking location of bores to be drilled. Otherwise, include in decision point/stage gate.
27-04-22 Item 4	The research proponent to contact NT ICN to source registered local drilling company.
27-04-22 Item 4	The research proponent to factor in regulatory requirements into project timeframes and budget.
27-04-22 Item 4	Further consideration on how to present findings to community members/groups and include clearly defined activities in proposal.
27-04-22 Item 4	The research proponent to invite a representative from the NT DEPWS to participate in the project’s Technical Reference Group.
27-04-22 Item 5	The research proponent to clarify current number of arrays already installed and whether any further arrays will be installed.

27-04-22 Item 5	The research proponent to remove reference to HF Inquiry Recommendations.
27-04-22 Item 5	The research proponent to make explicit that: <ol style="list-style-type: none"> 1) no arrays will be funded in this project 2) data from 2021 will also be looked at 3) HF industry data will be obtained from the companies 4) analysis of future monitoring requirement will be conducted
27-04-22 Item 5	The research proponent to invite a representative from the NT DITT to participate in the project's Technical Reference Group.
27-04-22 Item 6	The research proponent to make explicit what the literature review will provide in addition to papers already available.
27-04-22 Item 6	The research proponent to include an independent review of the leakage simulator.
27-04-22 Item 6	The research proponent to remove reference to HF Inquiry Recommendations.
27-04-22 Item 6	Further consideration on how to present findings to community members/groups and include clearly defined activities in proposal.
27-04-22 Item 6	Ensure that the leakage simulator incorporate all physical processes affecting the potential movement of fluids along possible pathways from target gas seams to surface.
27-04-22 Item 6	The research proponent to invite a representative from the NT Geological Survey to participate in the project's Technical Reference Group.