

Actions from GISERA Research Advisory Committee Meeting 9 May 2014

Key

Action Open
Action Due/overdue
Action complete/in train

	Item	Action	Owner	Due	Status
1.	09-05-14 Item 1	Action 1 : The GISERA Director will go back to proponents to ensure they introduce paragraph into the proposal that talks about interaction with the Water Chemistry Atlas project that Dr Sue Vink is working on.	GISERA Director	12 May 2014	
2.	09-05-14 Item 1	Action 2 : The GISERA Director will have discussion with Jim Underschultz at CCSG, to make him aware of this work and to look at potential collaboration and funding.	GISERA Director	12 May 2014	
3.	09-05-14 Item 1	Action 3 : Member 13 will send Jim Underschultz a copy of the project proposal.	Member 13	12 May 2014	
4.	09-05-14 Item 1	Action 4 : The GISERA Director will ask the proponents to introduce external peer review requirement for the reports and they will take the form of academic expert within a university.	GISERA Director	12 May 2014	

5.	09-05-14 Item 1	<u>Action 5:</u> The GISERA Director ask proponents to look through wording and make sure they rephrase any potential negative connotation and company representation in the proposal to make sure that the proposal maintains it independence.	GISERA Director	12 May 2014	
6.	09-05-14 Item 1	<u>Action 6:</u> The GISERA Director will seek from proponents, information to be included in the proposal around the Steering committee to include industry representative, a regulator an agricultural stakeholder and look to have Jim Unterschultz as a member of that committee.	GISERA Director	12 May 2014	
7.	09-05-14 Item 1	<u>Action 7:</u> The GISERA Director will speak to proponents about whether as part of the reporting, they introduce a component that looks at criteria for compliance requirements, as part of ongoing monitoring and will consider a component associated with a focus on hydraulic fracturing and whether or not spills are considered.	GISERA Director	12 May 2014	
8.	09-05-14 Item 1	<u>Action 8:</u> The GISERA Director will check on the capability input into this project.	GISERA Director	12 May 2014	
9.	09-05-14 Item 1	<u>Action 9:</u> The GISERA Director to check if proponents could look at attribute of water quality with or without fraccing.	GISERA Director	12 May 2014	

10.	09-05-14 Item 1	<u>Action 10</u> : The GISERA Director will undertake a revision of the budget.	GISERA Director	12 May 2014	
11.	09-05-14 Item 1	<u>Action 11</u> : The research proponents will consider the RAC's comments and revise the proposal accordingly.	Research Proponent	14 May 2014	
12.	09-05-14 Item 1	<u>Action 12</u> : The GISERA Director will send an email to the RAC confirming the project proponents have followed through and that those actions have been completed.	GISERA Director	15 May 2014	
13.	09-05-14 Item 1	<u>Action 13</u> : Following revision of the proposal, the RAC members will send an email to the GISERA Director confirming their approval for project to proceed to the Management Committee for consideration.	RAC Members	16 May 2014	

Minutes
GISERA Research Advisory Committee Meeting No. 5
Friday, 9 May 2014
Via Telephone

OPENING

The meeting of the GISERA Research Advisory Committee was called to order at 11.10 am on Friday, 9 May 2014 via telephone by the GISERA Director.

PARTICIPANTS

Damian Barrett: GISERA Director (*CSIRO*)

Dan Walker: Chief, Ecosystem Sciences (*CSIRO*)

Randall Cox: General Manager (*Office of Groundwater Impact Assessment*)

Steven Finlay: HSE Manager (*Australia Pacific LNG*)

Wayne Newton: Grains President (*AgForce*)

Will Rifkin: Chair in Social Performance (*Centre for Coal Seam Gas and Centre for Social Responsibility in Mining, University of Queensland*)

Jizelle Khoury: GISERA Secretariat (*CSIRO*)

Other members:

The following members did not attend the meeting, but provided written advice on the research proposal.

David Freudenberger: Senior Lecturer (*Fenner School of Environment and Society, Australian National University*)

Jim Grayson: Chief Executive Officer (*Gladstone Area Water Board*)

Graeme Bartrim: Chief Environmental Scientist (*Origin*)

Apologies:

Steve Raine: Professor of Irrigation and Soil Science in Faculty of Engineering and Surveying (*University of Southern Queensland*)

Anne Bridle: Secretary (*Basin Sustainability Alliance*)

ITEMS FOR DISCUSSION

1 Proposed GISERA Research Project

The RAC provided the following comments on the 'Review of dissolved hydrocarbons in groundwater in the Surat and Bowen Basins' research proposal:

Member 5 (via email)

- No mention of how the reports will be independently peer reviewed by experts in the field
- A statistical analysis phase is mentioned, but it is not clear what sorts of analyses will be done and by whom. The list of researchers does not include a

statistician with expertise in this kind of data. One may not be necessary if an existing member of the team has a demonstrated (published) capacity to do, or advise on, the statistical analyses.

- Similarly, what expertise does the team have in monitoring design and interpretation in this field of geochemical monitoring?
- Otherwise, clearly an important and high priority project. However, at a higher level, what is the strategy to prioritise new research like this? This is the second new project RAC has been asked to comment on this year, where did this project and the other sit in the broader development of GISERA research?

Member 6 (via email)

- The time of research that is proposed is precisely of the type that is required to make informed assessments of the impact of the extraction processes upon aquifers (by properly establishing the baseline). Accordingly, I support the proposal.

Member 2 (via email)

- I am supportive of the proposed research as presented.

Member 14

- This project has significant industry support. Ned Hamer from Origin has largely been dealing with Stephen Sestak at CSIRO pulling together the scope of this work. Input also from Peter Evans, Mohinudeen Faiz (APLNG), Craig Noble, Alan Davies (OGC BG Group), Antony Volcich (Santos), St John Herbert (Arrow Energy).
- Project is about understanding the distribution, nature and relationship of organic compounds, particularly hydrocarbons in groundwater in the Surat and Bowen Basins.
- There are two main work components associated with the project:
 - Compilation of data sets that are available generally or made available from companies
 - Analysis of that work and understanding the functional relationships between the distribution of those compounds and the geology (relating the geology and geochemistry)
- Outcome from this work will be insights into the baseline functional relationships between the distribution of geology in these basins and their geochemistry and a basis for looking at potential impacts of drilling and hydraulic fracturing through these basins.

Member 12

- Asked whether GISERA has an ongoing project on groundwater monitoring already in place.

Member 14

- GISERA has a project on groundwater geochemistry that is looking at a subset of traces that are being used to understand the origin of waters and hence the dynamics and partitioning of groundwater in the Surat Basin. That is a limited subset of the geochemistry that is provided in this proposal. This project is more comprehensive in terms of the species being examined and the geographic

range of this project is wider than the previous project, taking into account the Bowen Basin.

Member 12

- Wanted to check if there were any overlaps between the two and how they tie in to each other. Being focused on more specific areas that they are looking and expanding area to the Bowen Basin are keys points.

Member 13

- The CCSG at UQ has a Water Chemistry Atlas Project that is led by Dr Sue Vink. He noted that the project proponent of this proposed project, had not had a discussion with Sue to see where there is potential for value add.
- Now is a leverage opportunity
- Would prefer they have that conversation before funding is approved.

Member 14

- In understanding Sue's work and looking through this project, first impression is the depth in this research team is significant in terms of analysts.

Member 13

- The point is to prevent overlap and to make everything compatible.

Member 14

- Need to get the researchers to include a component in the proposal (one paragraph) as to how this project links with and leverages with Atlas project and is explicit about the value add in this project that avoids unnecessary overlap.
- The GISERA Director raised Member 5's comment that there is no mention of how the reports will be independently peer reviewed.
- The researchers could nominate a process of peer review. All projects and their reports that are undertaken as part of GISERA, do progress through an internal peer review process within CSIRO.
- The question is whether there is a need for an independent external peer review of these reports as opposed to the standard practices.

Member 12

- There would be value in having external peer review from academia or other researchers. We are trying to present this as research that can be used by other entities.
- The purpose of having an independent body like GISERA is to have independent reviews and accepted reviews and following of protocols.

Member 13

- We need credibility in the community. This is a really necessary study and people are worried about the gas getting in their water and what else is going in there. In some ways, having an academic reviewer is good, but we could also consider John Hillier (consultant) or David Free (Qld government's CSG Compliance Unit) who have more of a presence in the community.

Member 11

- While out in Chincilla recently, a leading landowner was annoyed about a letter they had received from a consultant or contractor who was doing some water sampling for CSG companies in the area. It is work they are required to do as part of the underground water impact report. The letter stated 'we are carrying out this program to show that coal seam gas isn't effecting the springs'. As far as the landowner was concerned, the study was not being objective.
- On page 9 of this hydrocarbons in groundwater proposal, where it reads 'the project aims to minimise the likelihood for hasty and potentially poorly scoped/executed assessments of possible future detection and reporting of hydrocarbons', that can be interpreted in a negative way by people. Would be easy to put in a more positive way with wording such as 'to improve the way in which the compliance work is carried out, so that it achieves what it is setting out to do'. People will react if it sounds internal and has not been peer reviewed. That is company money used here and the project is owned by the company. We should be alert to avoid those problems. Anything that reads we are acting for the companies here and that particular sentence, could be taken that way.
- Even if the peer review is not adding any value in terms of science, in terms of appearance, it does. We should make it clear that it has been subject to an external peer review.

Member 14

- Will ask project proponent to include process of external review of the reports, to add another layer of transparency and independence over and above what exists already within GISERA.
- Will ask project proponent to look for any negative and implicit company representation in proposal and have it rephrased.

Member 11

- Asked whether the research objective to 'Outline strategies related to differentiation of naturally occurring hydrocarbons and those inadvertently introduced during drilling, completion and hydraulic stimulation' was ambitious enough.
- Would they be looking to produce some criteria which could be adopted within compliance requirements. The back end of the project sounds a little vague. That is where it would become valuable to industry and communities generally, if it can translate into useful criteria which could map neatly across into compliance requirements.

Member 14

- The final report could provide advice on criteria for compliance requirements, as part of ongoing monitoring. That could be stated explicitly as an output for the final report.

Member 13

- Might be useful to have someone from the regulator on the reference panel.

Member 14

- In section 16 'Project Governance' there is mention of a steering committee. There is not enough detail in terms of who would make up the steering committee. Does not need to be overly managerial, but more of technical advisory committee and include one or two from industry, a regulator and other stakeholders (e.g. agricultural stakeholder).

Member 13

- Rather than have everyone in the room, they could be more of a reference panel. Proponents would be touching base more often than every six months.

Member 14

- The meetings can be done by phone conference.

Member 13

- They do not need consensus, but expert insight.

Member 7

- Reference group is a good idea.
- On page 10, there is discussion on hydraulic fracturing. Given some of the hysteria in some of the communities at the moment about fracking, it would be good if in the report, they could look at this attribute of water quality with or without fracking. Should be possible that they have enough samples to do that. Has heard discussions about hydrocarbons and it would be interesting to get some hard data on that.

Member 14

- Agreed this is a really important point.
- Within the communications side of GISERA, we are developing and reviewing our strategy going forward. One of the areas that we want to provide more community information on in terms of video casts, animations and other forms information transfer is hydraulic fracturing. This could link very closely to that emphasis in our communications strategy.

Member 11

- From industry perspective, the biggest issue is spills, rather than fracking. If we are looking at such pollution, as does occur, fracking is at the bottom end of any real risks.
- We have on the list, 'during drilling completion hydraulic stimulation'. There is the way in which it would be introduced, but do not know if that goes to transportation of storage in the process of drilling, but if that is where the main issues are, should that be within scope or is this being driven out of the compliance monitoring program's being inappropriate.

Member 14

- The risk analysis studies and the industry show that the risks associated with the fluids is orders of magnitude greater with transport than the hydraulic fracturing itself. At least in shale formations, there may be a bit more uncertainty around that in coal formations, particularly shallow coal formations.
- He will put to researchers the idea as to whether they consider and include potential for spills in the project scope. Suspect it is directed towards the latter which is around baseline and groundwater geochemistry and understanding the processes leading to the distribution of geochemistry that we have and information towards compliance monitoring of groundwater.
- In relation to spills and contamination of groundwater, that is a key part. Will discuss with proponents and ask them to consider the issue of spills.

Member 11

- Given that the focus is relating to the geology, they may not want to broaden the scope. Perhaps in final reporting they could set it in context. If people understood about the methane in the world they might not be so concerned about some of the induced methane losses. Understanding these issues in context is a journey that the community still need to take. A final report on a project like this, could help place the matter of hydrocarbons being introduced through these processes into perspective.

Member 14

- Member 5's other comments were around the capability of the team, in relation to its statistical expertise and geochemical monitoring expertise.
- The GISERA Director is not concerned about the capability inputs into this project. We have a considerable amount of depth. Will check with project proponents on this, but do not have any major concerns.

Member 13

- We could have someone on the reference panel with that expertise.

Member 14

- If we run independent review through a university academic, they will identify if not world class science. As the manager overseeing this project, he would pick up early on, if there were any problems.
- The size of the budget is a total cost of 653K for 12 months. The reason why the project is quite expensive is the depth of capability and the amount of time commitment that each of these scientists are putting in.
- The day commitment ranges from 25 to 80 days. In the order of 5 weeks full time, up to 16 weeks full time input into this project. That is a fairly significant input from individual researchers.
- Will go back to proponents and examine cost structure. Ensure we are getting everything we want out of this project.

Member 13

- There could be an element that the Centre for Coal Seam Gas (CCSG) could fund from remaining budget in the water area. Could have a talk with Jim Unterschultz. Jim overseas water research in CCSG.

Member 14

- Gets back to point about the Water Atlas that Dr Sue Vink is pulling together. Making sure we have that strong collaboration would be appreciated greatly from our industry colleagues. Will have that conversation with Jim to ensure there is that linkage there.
- Want to ensure we have sufficient dollars to fund other projects.
- Will go back and see justification of costs and examine in light of savings. Will look for savings, but still need to maintain quality of output.

Member 13

- If there is a part of the GISERA budget you would like to conserve, talk to Jim about his water research budget, which is separate from Will's social budget. Might be good to have Jim on the reference panel as he has relevant expertise.
- It can be difficult to get data from CSG companies. Sometimes the chain of command on who can release data is unclear. Project team will need to factor in this time to get clearance.

Member 14

- The team is expecting to receive over 1000 comprehensive samples from industry.
- There is an industry technical group that has been advising on the development of this project and provided assurance of data availability. The composition of committee during development of proposal has changed. Will go back to proponents to ensure they put in place mechanisms that ensure the delivery of data up front.

Member 13

- Expressed need to ensure that communications strategy is in place and things start up early in the work, so that the community knows what is going on.

Member 12

- Asked if communications strategy was part of the peer review mentioned earlier.

Member 14

- There are a couple of things that we have learned from the methane seeps projects in the early stages. Raising awareness of the projects and revisiting that when reports become available is invaluable. Have done a number of media interviews in relation to the methane seeps work and we have liaised with the Queensland Gas Commission to release information. Simply making communities aware that this work is going on. We are not reporting on any results, in the case of the methane seeps project, we moved past the end of phase one. We have released a review report. We have talked about suitable

technologies in the media and it made them aware that we are going to be out there doing pilot work. There is an appetite in the media for that sort of information.

- Will impress upon Tsuey Cham (GISERA Communications Advisor) to undertake a similar strategy in relation to this project.
- We received a firm message last year at the GISERA science workshop, that we need to get communications and information on projects out there. We are attempting to address that as much as possible.

Following the above discussion, it was resolved that:

Action 1: The GISERA Director will go back to proponents to ensure they introduce paragraph into the proposal that talks about interaction with the Water Chemistry Atlas project that Dr Sue Vink is working on.

Action 2: The GISERA Director will have discussion with Jim Underschultz at CCSG, to make him aware of this work and to look at potential collaboration and funding.

Action 3: Member 13 will send Jim Underschultz a copy of the project proposal.

Action 4: The GISERA Director will ask the proponents to introduce external peer review requirement for the reports and they will take the form of academic expert within a university.

Action 5: The GISERA Director ask proponents to look through wording and make sure they rephrase any potential negative connotation and company representation in the proposal to make sure that the proposal maintains its independence.

Action 6: The GISERA Director will seek from proponents, information to be included in the proposal around the Steering committee to include industry representative, a regulator an agricultural stakeholder and look to have Jim Underschultz as a member of that committee.

Action 7: The GISERA Director will speak to proponents about whether as part of the reporting, they introduce a component that looks at criteria for compliance requirements, as part of ongoing monitoring and will consider a component associated with a focus on hydraulic fracturing and whether or not spills are considered.

Action 8: The GISERA Director will check on the capability input into this project.

Action 9: The GISERA Director to check if proponents could look at attribute of water quality with or without fracking.

Action 10: The GISERA Director will undertake a revision of the budget.

Action 11: The research proponents will consider the RAC's comments and revise the proposal accordingly.

Action 12: The GISERA Director will send an email to the RAC confirming the project proponents have followed through and that those actions have been completed.

Action 13: Following revision of the proposal, the RAC members will send an email to the GISERA Director confirming their approval for project to proceed to the Management Committee for consideration.

NEXT MEETING

The next meeting of the Research Advisory Committee is yet to be scheduled. It is anticipated that a meeting will occur once the GISERA Director collates all the upcoming proposals together.

ADJOURNMENT

The GISERA Director adjourned the meeting at 12.05 pm.

Minutes submitted by: **Secretariat**

Minutes approved by: **GISERA Director**