

Actions from GISERA Research Advisory Committee Meeting 16 May 2013

Key

Action Open
Action Due/overdue
Action complete/in train

	Item	Action	Owner	Due	Status
1.	09-08-12 Item 5	<u>Action 1:</u> The GISERA Director will collate the RAC meeting minutes and will prepare a paper advising the Management Committee of the RAC's recommendations.	GISERA Director	10 August 2012	Completed
2.	09-08-12 Item 5	<u>Action 2:</u> These documents will be forwarded to the RAC, so that the RAC members can be mutually satisfied we have captured all views and that the instructions to research proponents are correct and clear.	Secretariat	10 August 2012	Completed
3.	09-08-12 Item 5	<u>Action 3:</u> The research proponents will revise the proposal based on advice from the RAC.	Research Proponent	20 August 2012	Completed
4.	09-08-12 Item 5	<u>Action 4:</u> The GISERA Director will forward the updated Portfolio Plan to the RAC members for noting.	GISERA Director	21 August 2012	Completed

5.	16-05-13 Item 1	<u>Action 1:</u> The GISERA Director will collate the RAC comments and forward them to the research proponent for consideration.	GISERA Director	17 May 2013	
6.	16-05-13 Item	<u>Action 2:</u> The Research Proponent will consider the RAC's comments and revise the proposal accordingly.	Research Proponent	21 May 2013	
7.	16-05-13 Item	<u>Action 3:</u> The GISERA Director will send the revised proposal to RAC for final endorsement.	GISERA Director	23 May 2013	

Minutes
GISERA Research Advisory Committee Meeting No. 4
Thursday, 16 May 2013
Via Telephone

OPENING

The meeting of the GISERA Research Advisory Committee was called to order at 9.10 am on Thursday, 16 May 2013 via telephone by Peter Stone, GISERA Director. Peter introduced and welcomed new members Steven Finlay, Will Rifkin and Randall Cox.

PARTICIPANTS

Peter Stone: GISERA Director (*CSIRO*)

Graeme Bartrim: Chief Environmental Scientist (*Origin*)

Anne Bridle: Secretary (*Basin Sustainability Alliance*)

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

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

Wayne Newton: Grains President (*AgForce*)

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

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*)

Ian Prosser: Deputy Director - Water for a Healthy Country National Research Flagship (*CSIRO*)

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

ITEMS FOR DISCUSSION

1 Proposed GISERA Research Project

The RAC provided the following comments on the 'Characterisation of regional fluxes of methane in the Surat Basin, Queensland' research proposal:

Member 5

- Approved project subject to considering the following points:
 - Value Proposition: Concerned that the ambition of project is greater than time and funding available. The proposal states (p8) that a project outcome will be "A comprehensive and rigorous scientific analysis of

background methane...” It will likely to be “rigorous”, but questioned the capacity given two years and a limited budget that the research will deliver “comprehensive” analysis given the apparently large technical, spatial and temporal uncertainties involved with quantifying ‘background’ methane emissions. He predicts that, at best, a two year research program would provide a ‘detailed and costed strategy to rigorously and comprehensively quantify background methane fluxes for the Surat Basin’.

- Research Phases: Suggested a new phase and decision point needed after Phase 2 (piloting). A monitoring strategy and detailed costing is needed before ‘Broad Application’. How can a budget be developing for Broad Application when the technology and sampling methodology is not yet known and is dependent on the outcomes of Phases 1 & 2? It’s not clear how these phases could overlap (p. 5) since phases appear to be path dependent on the previous phase.
- Desktop analysis: It wasn’t clear what assessment criteria will be used to review what technologies will likely be best suited for quantifying fluxes at such a large scale with such high potential seasonal and spatial variation. Likewise what assessment criteria will be used after phase 2. Perhaps one of the research outcomes (e.g. research paper) for Phase one is a logical assessment framework for technology and sampling strategy for quantifying background fluxes.
- Fit for purpose: A key outcome of this research with Industry is the capacity to detect new sources of fugitive methane emissions with a known degree of certainty (e.g. accuracy and precision). Quantification of background emissions needs only be good enough to detect new sources in space and time. Suggest some thought and analysis should be included in this research proposal in regards to the detection sensitivity needed to identify new sources. Is it possible to ‘artificially’ (experimentally) introduce a methane source to test or demonstrate the capacity of a monitoring program to detect new emissions that are statistically likely to be above background fluxes?

Member 10

- This project fills an important research gap, is consistent with GISERA’s scope and aims and (although is not area of expertise) is well conceived and designed.
- Project is endorsed.

Member 6

- Fully support the work being contemplated to both assess and quantify any fugitive emissions of methane and place this work into a public forum.

Member 8

- Agreed that the topic is very important and to include it in GISERA will be a valuable addition to the portfolio. Because of the importance of the topic the proposal needs to be the best possible to ensure success.
- Raised one concern - CSIRO published a review of fugitive emissions from the CSG industry. While that is not exactly the same topic as the proposal, which is about baseline emissions, some of the top down techniques and the literature reviewed are relevant to the proposal. Some of the authors of the proposal were authors of the earlier report. Thinks that earlier work should be mentioned as a

useful starting point. It should make the first phase of the proposal easier to do because some of the relevant literature has been reviewed.

Member 2

- For analysis detection sensitivity, it may be worthwhile to see how methane is currently being measured by industry, to help make results from different studies comparable.

Member 1

- There are several different approaches to measuring methane – some use open air detection, some use lasers, some use chambers. All of these are good, and the trick is to match the method to the task at hand.
- There is a review that CSIRO produced a few months back which discussed how to match methodologies to tasks.

Member 3

Sought clarification on the goals of the second phase of project. Is the project seeking to design a process for doing field work, or will it actually do the field studies that the community is seeking? Either way, what scale will the work tackle – single wells or larger fields? Is it only looking at methane flows to the atmosphere or into surrounding hard rock strata and aquifers or into waterways?

Member 1

- The project is seeking to do:
 - understand methane seeps in the natural state – what is the natural rate of seepage if humans hadn't showed up
 - understand how seeps have changed as a result of human activity not related to gas extraction, such as depressurisation of aquifers through stock, domestic and agricultural withdrawals
 - understand how seeps have changed as consequence of current gas extraction activity.

Member 3

- Raised concern about how much work is being done to get a handle of depressurisation – proposal covers natural pathways and man-made pathways, but not depressurisation. Is that what is happening in the second phase?

Member 1

- Depressurisation is a big part of the project.

Member 3

- Missing a pathway to groundwater aquifers. If it is only concerned with methane migration to the atmosphere it is missing a major concern.
- Gas migration in aquifers is a major source of conflict where gas extraction is happening. The work should include this.

Member 2

- Agreed with that issue of concern, but noted that this particular project is about methane in the atmosphere.

Member 1

- Understood concern and commented that it would be great if project looked at more.

Member 9

- Agreed that migration into other aquifers is important, but appreciates this is not the focus.
- Desperately need information about the topic in this proposal.
- Can see output in phase 1 clearly, but output in phase 2 and 3 not clear.
- This project will live and die on communications to community.
- Keen to see statements on when and how each of phase outputs are going to be communicated.

Member 13

- Endorsed Member 9's comment on communications.
- Project needs a communications strategy.

Member 1

- GISERA has communication specialists and their roles do not appear in project proposals.
- We assiduously separate science and communications activities.

Member 9

- Need to be clear about of what each of the outputs are.
- Focus is very much on natural pathways. Needs to be cognisant there are 1000's of exploration holes and bores which will also contribute to gas emissions. Some clarity required on what we are trying to measure in analysis - is project going to include man-made pathways?

Member 2

- Agreed with Member 9's comment.

Member 3

- Will optimal temperature for flaring and venting be included?

Member 1

- No, this project is purely looking at the seeps. We tend to categorise greenhouse gas efflux to the atmosphere via three pathways:
 - seeps – occurring through ground or water
 - fugitive emissions arising from gas extraction infrastructure and handling
 - those arising from combustion of gas.
- We are in discussions with industry and government about research that would take into account fugitive emissions.

Member 3

- Keen to have a new project look at gas migration and flaring and venting.

Member 11

- It would help if the proposal set more context at the beginning.
- Happy with scope of project.

- Seeps are much more problematic than bores. More difficult to measure.
- This needs to lead to something in the longer term for monitoring activities. Need to make clear how the project will inform an ongoing monitoring program that can be implemented by others.

Member 1

- Thank for discussion to date. If I try to summarise: is it accurate to say that the RAC seem happy with the project theme, but need to be much clearer about what it seeks to achieve and what it does not seek to achieve.
- Should specify
 - what and when it seeks to achieve
 - what people can expect to know at end of project and
 - what other work needs to happen that public is concerned about.

Member 7

- Good summary – might elaborate in the proposal introduction that the project will not address some important issues and that further work is required on these e.g. methane efflux to aquifers.

Member 9

- Happy to endorse the project in principle, but important that outputs are made clearer.

Member 12

- Not prepared to endorse, until there is clarity around issues discussed.

Member 9

- Good to be clear on what engagement will occur with researchers doing similar work and with government agencies?

Following the above discussion, it was resolved that:

Action 1: The GISERA Director will collate the RAC comments and forward them to the research proponent for consideration.

Action 2: The Research Proponent will consider the RAC's comments and revise the proposal accordingly.

Action 3: The GISERA Director will send the revised proposal to RAC for final endorsement.

2 Progress of GISERA's Research Portfolio

Member 1

- Asked how RAC would like to engage in this process – how much information and how much responsibility would they like to take on?
- Are they happy to use traffic lights and tables and then examine a subset of projects for annual review?

Member 9

- Happy with traffic light approach.
- Will look to GISERA Director to raise with RAC if projects are behind and need to be re-focused.

Member 7

- Happy with traffic light approach.
- We're not project managers. We are happy to rely on GISERA Director to identify issues that require our attention.

Member 2

- Would be good to have information on 3 components of projects:
 - is it on time?
 - on budget?
 - will it meet objectives?

Member 3

- Agreed with Member 2's comment.
- Is asked where GISERA is up to frequently. Would be good to have summary.

Member 13

- Would be good to know what project findings were. CCSG do a poster that lists 2 sentences for each task.

Member 1

- We have those statements on the GISERA website in the "Research" menu.

3 Other Business

3.1 Biodiversity Project 3

- Member 2 advised that he has been in communication with Griffith University to find PhD students for Biodiversity project 3.

NEXT MEETING

The next meeting of the Research Advisory Committee is yet to be scheduled. The "gas seeps" project will be reviewed out of session. It is anticipated that a meeting will occur to review progress as required.

ADJOURNMENT

The GISER Director adjourned the meeting at 10.00 am.

Minutes submitted by: **Secretariat**

Minutes approved by: **GISERA Director**