

Research Advisory Committee

Feedback on Proposed Research Portfolio 5 March 2012

Participants in person:

Peter Stone: GISERA Director (CSIRO)
Joanne Flint: HSE manager (*Australia Pacific LNG*)
Graeme Bartrim: Chief Environmental Scientist (Origin)

Participants via telephone:

Dan Walker: Deputy Chief, Ecosystem Sciences (CSIRO)
Ian Prosser: Deputy Director - Water for a Healthy Country National Research Flagship (CSIRO)
Anne Bridle: Vice-Chair (*Basin Sustainability Alliance*)
Wayne Newton: Grains President (*AgForce*)
Steven Raine: Deputy Dean & Associate Dean (Academic), Faculty of Engineering and Surveying (USQ)

Apologies:

David Freudenberger: Chief Scientist (*Greening Australia*)
Jim Grayson: Chief Executive Officer (*Gladstone Area Water Board*)

Note: Both David and Jim provided comments prior to meeting.

Surface and groundwater

COMMENTS RAISED:

Member 5

- Commented that temporal and spatial scale and resolution are likely to be key issues and wanted to ensure this was looked at in Water projects 1 and 4.
- Baseline measurements as proposed in project 1 need to be designed carefully so that they quantify spatial and temporal variation in water quality and depth in a way that informs cost-effective long-term monitoring.
- Models developed in project 3 should be tested (over space and time) against data derived from monitoring.

Member 9

- There is unrealised scope for engaging a greater number of post-graduate students, and this would help to overcome weaknesses in studentships and capacity building as identified in the project attributes table.
- Greater clarity is required on the boundary conditions that will be for modelling and baseline monitoring. Please specify more closely in the project proposals.

Member 4

- In response to Steve Raine's comments: the research is based on 3 year program and coincides with trials occurring at Spring Gulley and Talinga, with a third one in the pipeline. All research in the water domain applies to the Surat Basin. It is envisaged that as the resources available for research increases, so will the geographic scope. Can then be used for subsequent trials beyond initial locations.
- It would be valuable to continually review the scope of research projects so that as circumstances, resources and priorities change, necessary adjustments can be made to the research portfolio.

Member 7

- Where are geochemical trials going to take place?
- Was surprised that boundaries were not specified.

Member 4

- Confirmed trials will be in the basin.

Member 8

- Suggested that Project Leaders be asked to be more specific about geography for all projects.

Member 9

- Although research area is called Surface and Groundwater, cannot see that surface water has been included in research.
- Cannot see impact of CSG on floodplains, road, tracks and erosion.

Member 4

- Groundwater was greater priority

Member 8

- Water resources looks at groundwater and surface water interaction and changes to flow patterns. Would be covered in baseline and modelling and looks at groundwater interaction.

Member 7

- Not clear in wording that surface water is included.

Member 1

- Will ask Project Leaders to modify wording based on feedback. Ensure work on surface water is more apparent.

Member 3

- Unfortunate that delivery is some time away. Is it possible to scaffold projects to get them to be delivered earlier?
- For the work around reinjection, concerned that all well and good to reinject water, but we need to be able to retrieve water. Putting water down will change characteristics of aquifer. May need to be looked at.

Member 8

- Peter Dillon has been working on aquifer storage and recovery. Looks at issues of injection and use of that water. These are core to framework for storage and recovery.

Member 3

- We need assurance of water recovery. Would be good to recognise that information is out there. Communities are 'crying out' for this information.

Member 8

- We can get framework more explicitly out there.

Member 1

- There is work going on in the background and people are working on this as much as they can.
- Noted that research is not particularly strong in community engagement, creation of studentships and in regional capacity building. This is understandable given depth of capacity.

Member 3

- This could be a barrier.

Member 1

- Directly addressing engagement with community and communication of what we are doing will help to overcome weakness.

Member 9

- USQ have put on 2 hydrologists.
- Keen to engage with student capacity.

Member 9

- Not clear about level of interaction, if any, with other modelling that is occurring, in particular with QWC. Hard to know if closely linked to other modelling that is occurring.

Member 1

- Proponents have been in close discussion with QWC.

Member 8

- People working on this research are also working with the whole of Great Artesian Basin. They are working with QWC and others to develop models and ensure quality assurance. There is involvement across all those scales.

Member 2

- Would be worthwhile to add to all projects 'built on working with others'.

OUTCOME:

It was recommended that all water projects proceed, subject to consideration by research proponents of the following items:

- Consideration should be given to engaging and supporting post-graduate students. USQ are keen to partner in this.
- The project suite is more clearly focused on groundwater than surface water. Links between surface and groundwater studies should be made more explicit.
- Geographic boundaries for all water studies (including the locations of specific activities) should be made more explicit.

- It would be helpful to expand the description of aquifer recharge studies so that their potential impact on regional water resources and potential water access can be made more explicit.
- The articulation of the water research portfolio with past, present and planned work relevant to CSG impacts should be made more explicit. In particular, key relationships such as those with QWC should be outlined.
- Regular project reviews should be used to ensure that research foci remain optimal

The Research Advisory Committee noted the following research gaps, for consideration when developing future work:

- Impacts of CSG development on groundwater recharge
- Work that is more clearly devoted to a systematic understanding of surface water hydrology. It is understood that this will form a part of the agricultural research portfolio, but a more systematic treatment may be beneficial.

Agricultural land management

COMMENTS RAISED:

Member 5

- This research is well formulated as it takes a risk management approach.
- Project 1 implies yield analysis, profitability analysis should be included. Is food security really an issue here, or farm enterprise profitability/compensation?
- Erosion and weeds are clearly risks with a high degree of uncertainty, so clearly needed research

Member 1

- Impacts on farm function, productivity and profitability will be examined. This will be scaled up to examine potential impacts on food security. Compensation will not be addressed directly, as that is ultimately a policy decision and commercial negotiation. Research can provide data to support decisions and negotiations.

Member 3

- Asked whether the work assumes that farms area blank canvas or green fields site upon which gas development will occur

Member 1

- This research is about understanding how farms actually work – we are not starting with a blank canvas. The work is designed to understand how working farms function, how that function will be interrupted by gas development, and how the research can minimise that interruption.

Member 9

- These projects will run as one large project. There will be a big overlap and linkage over time between earlier and later activities.

Member 3

- Pipeline is a real issue to land owners. Concern by land owners about use of land above ground once pipes are laid below.

Member 1

- The regulatory framework is not explicitly addressed in this research, but information that will be made publicly available could be used by any party in their discussion about regulatory frameworks.

OUTCOME:

It was recommended that all projects proceed subject to consideration by research proponents of the following item:

- The specific location(s) and geographic boundaries for all agricultural land management studies should be made more explicit.

No particular research gaps were identified.

Terrestrial biodiversity

COMMENTS RAISED:

Member 5

- It is not clear how this research seeks to directly reduce the impacts of coal seam gas. The Ag projects are clearly about reducing and mitigating risks of impact, why not the same approach for Biodiversity? What are the risks of coal seam gas to biodiversity? How can these risks be most effectively reduced or mitigated (e.g. offsets etc). This does not come through clearly in the proposal.
- Where most of other parts of research portfolio clearly seek to reduce impact of gas development, less clear how biodiversity research seeks to reduce impact.
- Bottom line, coal seam gas will destroy some habitats, how can research help to inform how this can be mitigated with confidence?
- The Atlas of Living Australia needs to be made more explicitly considered as a potential collaborator and route to market. There is impressive infrastructure to work with there.
- Is fire really an issue in Central Qld? It is not clear how fire affects the key processes of habitat and species threats, or invasives. This must be better argued in the proposal.
- Project 4 :What about guidelines for offset management?? – many offsets will likely need to be established on semi-degraded country to get a net gain. Placing a covenant on high quality remnant is NOT a net gain. Research is needed in this gas development region on how offsets can best be managed to improve biodiversity – e.g. enhancement of Brigalow regrowth
- Is the work seeking to help understand how different methods may be used in different habitats?

Member 2

- With Biodiversity Project 4 (Landscape Planning), we will need to comply with Federal and State Government. As a consequence, it's not clear how much value there is in this project. Re-scoping will be required to add value to project 4.

Member 3

- There is local concern that offsets will enable important environmental assets to be reduced in one area and increased in another, possibly miles away. This may or may not preserve the overall environment, but it certainly does not help to maintain local people's connections with the environment. How can this be addressed?
- The benefit of offsets on regional level environmental integrity is not clear.
- There is concern that the projects focus on maximising the bang for the buck, rather than increasing and maximising environmental protection.

Member 2

- The proponents are coming together now more than they were, as more work being done, to try to understand how they can work together to create offset plans that work to maximise outcomes at a regional scale. It is understandable that local communities are concerned about how offsets will affect local biodiversity.

Member 3

- Asked if it will have some spatial mapping capacity for data?

Member 1

- Spatial mapping capacity will draw on and possibly deliver through the Atlas of Living Australia.

Member 10

- In response to Member 5's point about how the biodiversity research portfolio does not address risks, impacts and mitigation strategies as clearly as other subject areas: this is partly because biodiversity is part of a more complex system than most of the other subject areas, and that 'engineering' approaches are less possible. The research seeks first to develop understanding, as a method for underpinning subsequent work on impacts and mitigation.

Member 1

- Need to show this work fits in with existing ecological knowledge, work and frameworks.
- Need to show how links are to be made between this and other work.

Member 1

- Misrepresented regional capacity building on the project attributes scorecard, as there are many post graduates involved.

Member 2

- The aim of Biodiversity project 3 is for species to be as abundant as when we started.

OUTCOME:

It was recommended that projects 1, 2 and 3 proceed subject to consideration by research proponents of the following items:

- The project attributes scorecard is to be amended to reflect the high number of post-graduate students associated with the proposed research
- Geographic boundaries for all studies should be made more explicit
- There is a need to better demonstrate how this works fits in with previous and planned work, and with work being conducted by others
- Links to existing resources such as the Atlas of Living Australia, and their role in project delivery, need to be made more explicit

It was recommended that project 4 be re-scoped by project proponents for subsequent review by the Research Advisory Committee.

Marine Environment

COMMENTS RAISED:

Member 5

- The proposed research is well targeted, aimed at quantifying risks and predicting local impacts
- Have marine reserves and habitat improvements been considered as offsets?

Member 6

- The proposed research is looking at the right sorts of things.
- Would like Marine project 1 to look at more research on other species. Acknowledged constraint of resources requires focus upon the highest in value or importance. He questioned whether the focus could be reasonably expanded to any identified NES in the same geographic region or perhaps any NES in the region under focus e.g. certain sub-species of dolphin.

Member 4

- To be most useful, a study of offsets requires an understanding of the whole marine environment.
- Given the available resources and the existing State and Federal guidelines, this research probably more profitably looks at seagrass and rehabilitation of seagrass when there is no opportunities to avoid the impact
- The modelling on Marine projects 1 and 2 has been specifically linked to other CSIRO work.
- We'd like to see re-scoping of the offset part of the research
- It's possible that we'd like to focus more on the inter-tidal zone, where species living in mangroves may be affected by development.

Member 1

- Research lacked engagement and capacity building.
- There are other universities already doing a lot of research on this already. Our work isn't designed to replace that, but to fit in with it. That will need to be more completely articulated.

OUTCOME:

It was recommended that Marine projects 1 and 2 proceed subject to consideration by research proponents of the following items:

- Research lacked engagement and capacity building
- Research gap for consideration when developing future work was the habitat impact mitigation for threatened species in the inter-tidal zone i.e. water mouse.
- Budget to be specified for each project

It was recommended that Marine project 3 be re-scoped by project proponents for subsequent approval by the Research Advisory Committee.

Social & Economic

COMMENTS RAISED:

Member 6

- Could not discern whether the research would be focussed in a particular area. Specifically, in relation to Project 2, suggested that there be a differentiation in some of the findings attributable to region (e.g. size, current infrastructure, rate of growth, duration of growth).
- There could be improved value from a greater focus and understanding of the differences in 'baseline' and 'impacts' across the various regions in the scoping of the project. In Gladstone, the GEIDB has done good work around what the community considers to be indicative of sound functioning and well being.

Member 5

- Research goals 2 and 4 (plain English summary) give the impression that elements of the work lack a strong quantitative focus. Is it possible to provide a greater quantitative risk/opportunity focus to work on community functioning and well-being and on post-gas enterprise development?
- Rather than simply providing advice on investment to support community function and well-being, is it possible for project 2 to recommend a risk minimisation strategy?
- Project 4 – it was good to see the proposed policy briefs for the different levels of government. These should also be prepared for project 5.

Member 4

- Project 4 and 5 are relevant right across the regions in which development will occur – not just the Southern Queensland mentioned in the proposal. This should be changed.

Member 1

- Do we need to think about how work articulates with industry staff and the broader industry? The work appears to adopt a stand-and-deliver rather than a participatory approach with industry staff.

Member 10

- Research is more social than economic. Not devoid of economic elements, but justified given the work on economics that is being done elsewhere (e.g. in Govt Departments).

Member 4

- Need to clarify more details around housing services for Project 3 – whether scope is well defined yet – making sure that the execution includes interactions with government and universities is important.

OUTCOME:

It was recommended that all projects proceed subject to consideration by research proponents of the following items:

- Greater specificity of the geographical locations and boundaries for the work. In particular, Project 4 and 5 are relevant right across the regions in which development will occur – not just the Southern Queensland. The project portfolio could better explain the scale at it will be examining impacts, opportunities and potential interventions, and the characteristics that attend these. Will research be conducted and reported with sensitivity to the different situations of different parts of community/landscape and their different size, current infrastructure, rate of growth, duration of growth, etc. This should be more clearly articulated.
- Consider greater focus and understanding of the differences in ‘baseline’ and ‘impacts’ across the various regions in the scoping of the project.
- Need to clarify more details around housing services for Project 3 and ensure the execution includes interactions with government and universities.

Final Discussion

- All Research Advisory Committee members to be given access to the GISERA SharePoint
- All papers describing how projects were shortlisted to be uploaded on the SharePoint.
- Projects that were not shortlisted will also be made available on the SharePoint.
- Question raised for the Management Committee concerning the proportionate level of funding for the marine projects.