



Telling the Story

Knowledge Transfer Meeting

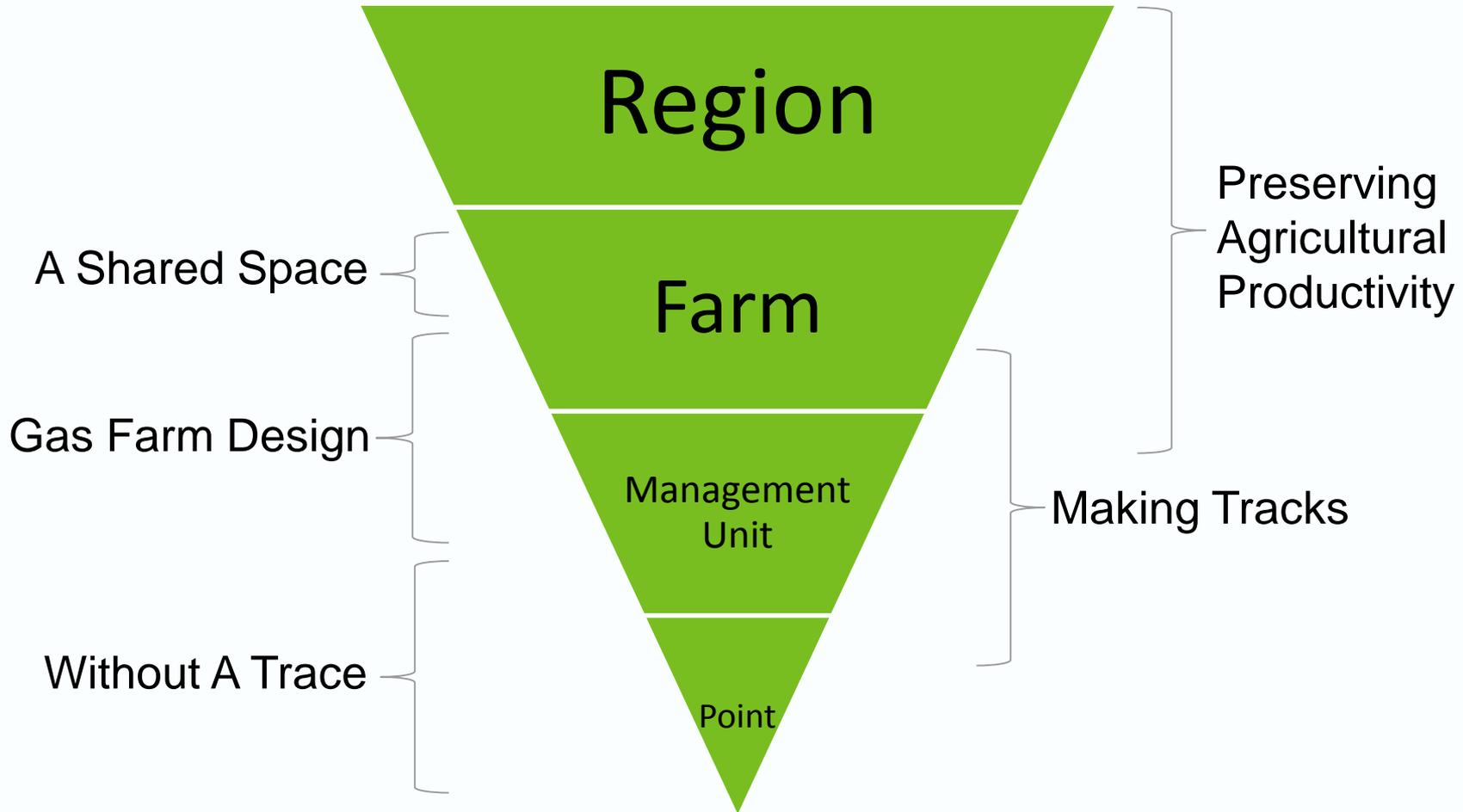
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Gas Industry
Social & Environmental
Research Alliance

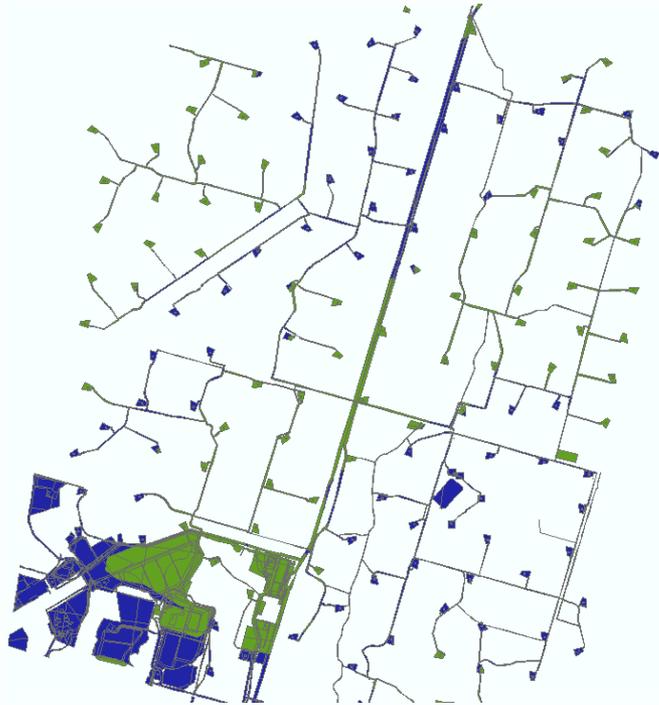


Working/Integrating Across Scales



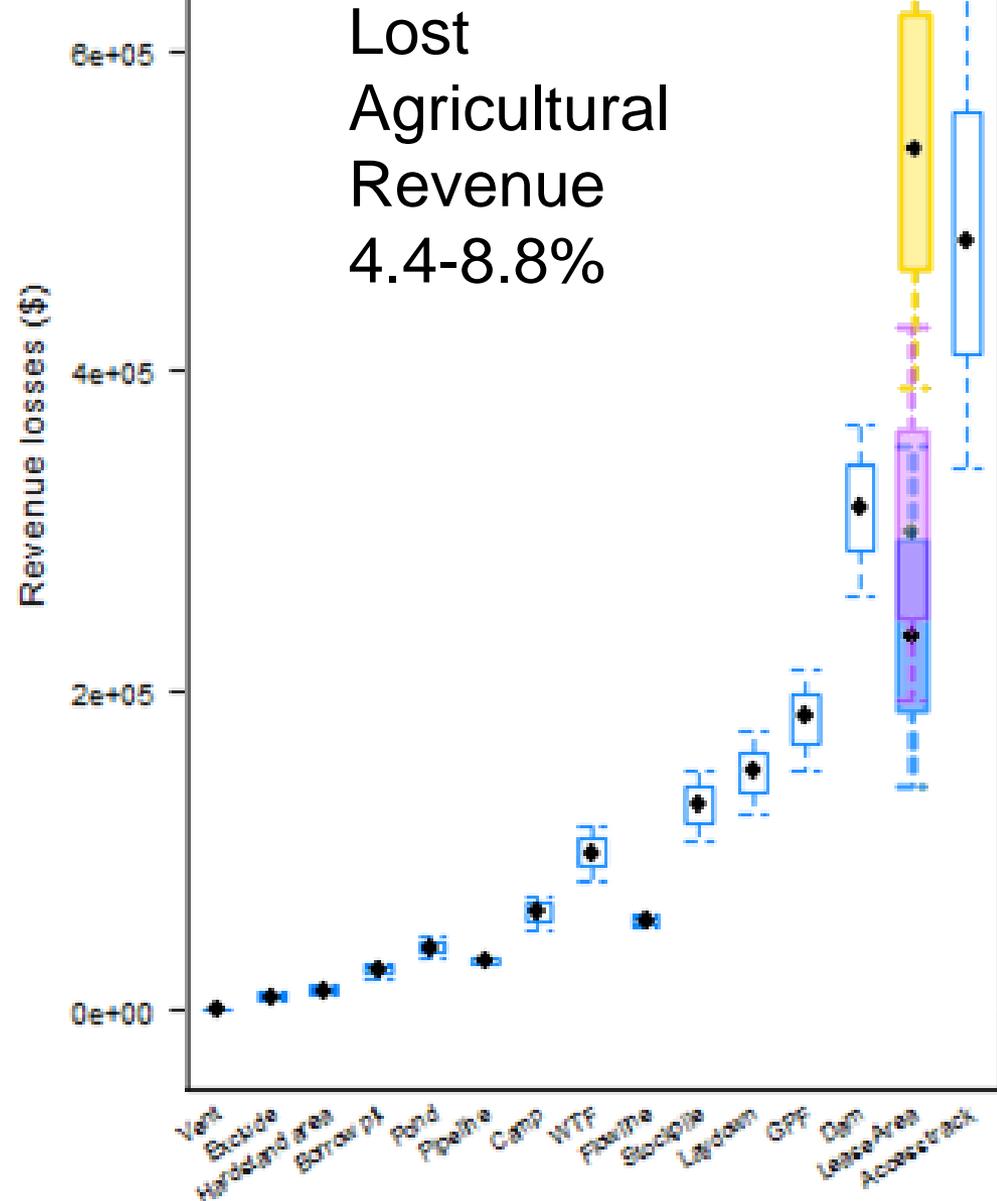
PROJECT 1

Changing Spatial Footprint of CSG on farming land over time



1km

Number well workovers: 2, 5, 15



PROJECT 2

Communication is important but many CSG staff or contractors do not communicate the way farmers do, or see through farmers' eyes.

Local is important – locally based CSG staff can bridge this gap.

Information is important – farmers want info in their hands to help them manage the process better.

Farmer's perceptions of coexistence between agriculture and large scale coal seam gas development

Working paper

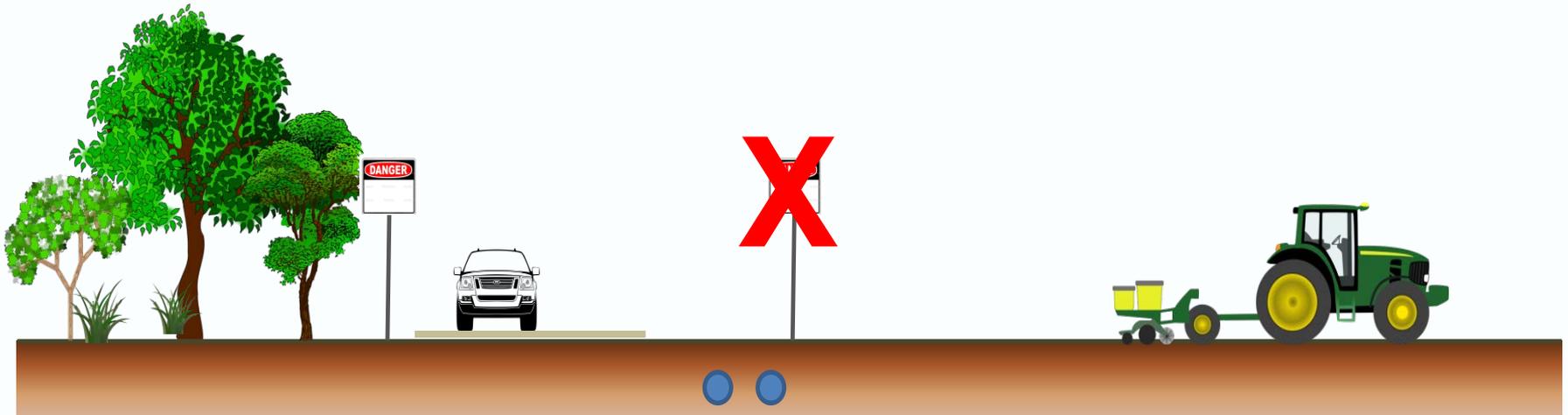
Neil I. Huth, Brett Cocks, Neal Dalgliesh, Perry L. Poulton, Oswald Marinoni, Javier Navarro Garcia

June 2014



PROJECT 3

Ways to design and negotiate CSG layouts that worked on farms.



Woodland

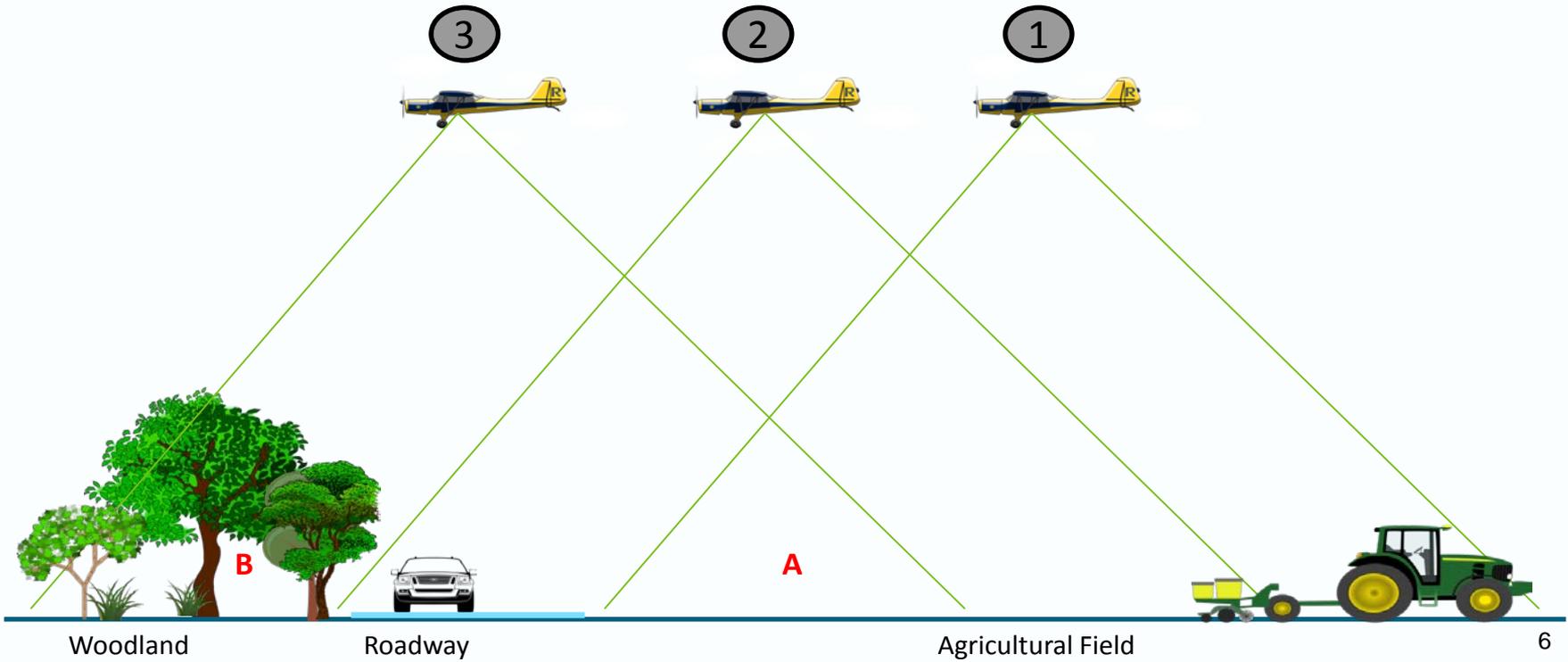
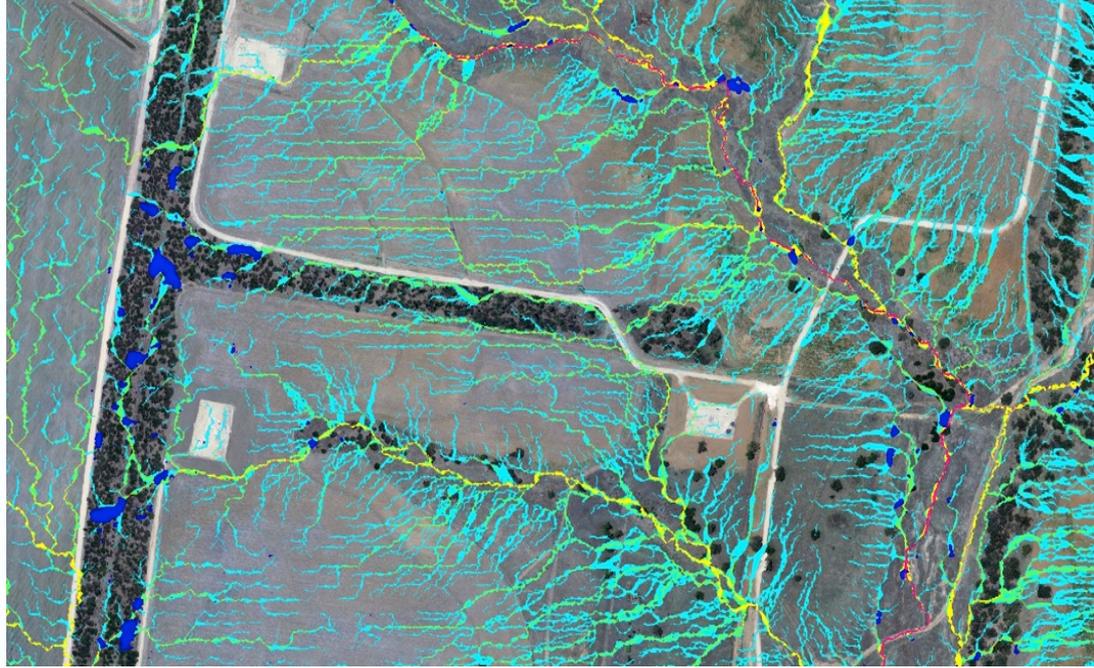
Roadway

Pipelines

Agricultural Field

PROJECT 4

High precision digital photogrammetry to monitor changing water flows in CSG tenements



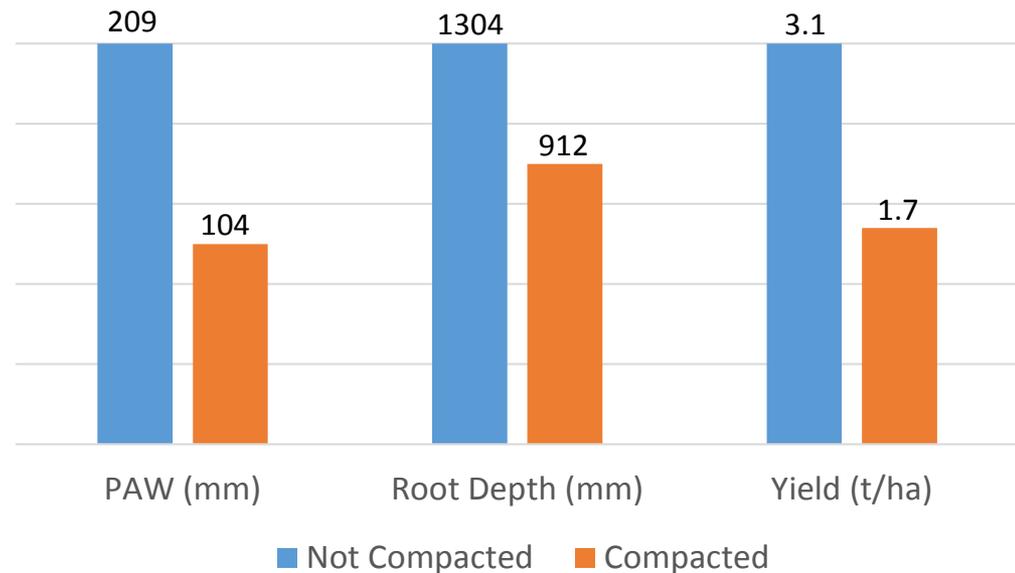
PROJECT 5

Mitigation and/or rehabilitation of soil damage from CSG

- Soil mixing
- Soil compaction
- Chemical changes

Compaction is similar to existing state government trial data

Likely to rehabilitate with natural processes over 5-7 years.



What was this project all about?

GISERA phase one has seen a large amount of research undertaken in Queensland on a variety of topics and community members are keen to have this information.

However, discussions at several agricultural research forums have raised the problem that farmers feel they do not have sufficient time to collate and interpret the large volume of information they receive from industry, community, and research groups.

They have been requesting that a means of packaging and communicating relevant and useful information be developed.

Project Aims

- To prepare story pieces that summarise changes to farming and community from CSG development using maps, surveys and other research to date.
- To understand the usefulness and relevance of our research.
- To identify gaps in our research.
- To understand trust in our research.
- To clarify information needs at this stage of the industry cycle.

Story Pieces

SOCIAL	LANDSCAPE CHANGE	FARMING PRACTICES
Community wellbeing in the Western Downs: 2014 and 2016	Water Flow maps and 3D virtual landscapes	Understanding the way farmers see their farm
Community attitudes towards CSG development: 2014 and 2016	Spatial data on CSG footprint	Farm Machinery GPS Data around CSG wells
Responding to change: 2014 and 2016	Historical Aerial Photographs	Soil Compaction

Fact Sheets

MAY 2016 | AGRICULTURAL LAND MANAGEMENT FACTSHEET

Understanding the way farmers see their farm



Farmers and CSG workers may come from different backgrounds and this can impact on communications between them.

The CSIRO Shared Space project has shown that the aesthetics (visual aspects) of a farm is quite individualised and specific to the farmer and potentially a cause for a lack of understanding from others.

KEY POINTS

- Farmers feel that the issue of place identity is not well understood by many CSG workers from non-rural backgrounds.
- Landscape impacts can be difficult for farmers to communicate to CSG workers because of differing underlying value systems.
- Involving people from rural backgrounds as part of the CSG workforce could improve communication of the things that are important to farmers.

Example: Why do farmers like to keep things tidy?

"Tidy is healthy" (Crazier from Roma)

"Tidy is efficient" (Mixed cropping, Dalby)

There are often personal values that underpin the way a farmer sees a farm landscape. Others may not see the farm the same way.



Farmers can see efficiency in straight rows and level fields.

For the farmer, understanding the way in which he or she sees their farm is the first step to being able to communicate this to others.

There are two reasons why communication can be difficult.

Farmers identify with their farm

Farmers have a close relationship with their farm. Researchers refer to this as place identity. Four aspects to place identity have been suggested as being important:

Distinctiveness: A 'place' has symbolic meaning for people. It helps to describe someone and set them apart from others. Farms can be an expression of who we are.

Continuity: Memories of a place can link a person to their past or heritage. Farmers may have a long family history on a farm.

Self-esteem: A person gets positive feedback from a place with which they identify. Just as gardeners feel best in their garden, many farmers get personal strength from their farm.

Self-efficacy: A place facilitates a person's lifestyle and personal goals. The farm is the basis for the farm business, the family and much of what farmers want to achieve from life.

Farmers see their farm in a different way

We all see and enjoy different landscapes in different ways and this also applies to farming landscapes. For example, a flat treeless paddock may look perfect to a farmer yet big and boring to someone from a non-farming background. Scientists refer to this as *Landscape Aesthetics*.

We often see things differently because of our different experiences and value systems. The way farmers see their farms has been studied across the globe. Many farmers like their fields to look "neat and tidy". Research has shown that this reflects the farmers understanding of what such tidiness means in different contexts. For example, straight, neat rows can indicate technical proficiency with farm machinery.

Simple 2 Page Fact Sheet
With Standard Format

One simple message per sheet

Key points highlighted clearly

Describe the research in
simple terms



www.gisera.org.au



Fact Sheets

These same underlying values can sometimes cause us to find some landscape features unattractive.

When farmers see CSG infrastructure they sometimes describe it as "this looks wrong" or "it looks untidy". This may not necessarily reflect the style or design of a CSG well, but the way a farmer interprets the impact of that well on the farm. "Untidiness" on a farm may also relate to a perceived weed or erosion threat, or an impact on farm machinery. A fellow farmer may see this the same way and understand what you see, whereas someone from a non-farming background may not.

Bridging the gap

Our research showed that many farmers felt that a lack of understanding and appreciation by CSG companies of these differences in the way a farmer and a non-farmer might see the same thing made communications difficult.

Those farmers who thought their CSG liaison did understand the way they saw their farm felt that this was because their contact was a local person or somebody from a rural background. This highlights one way to bridge this communication gap.

What does this mean for me?

This research highlights the potential for misunderstanding when a farmer is trying to explain things that are important to them. Requesting that their liaison person is someone who has a good understanding of farms, or who understands the way farmers see their farm and can "talk their language", would be beneficial when negotiating with a CSG company.



What do you see here? Would others see this picture the same way?

FREQUENTLY ASKED QUESTIONS

How did you conduct the research?

We conducted a series of workshops with farmers in Roma, Chinchilla and Dalby to explore farmers' perceptions of some of the issues arising from CSG, farming and farm families now occupying a shared space.

When did you conduct the research?

We conducted the workshops in early 2013.

What did you investigate?

- The importance of place identity and landscape aesthetics for farmers (reported here)
- Farmers' acceptance and coping with change
- Possible benefits from off-farm income.

Where do I find more information?

A complete report of the Shared Space project can be found at the GISERA website: "Farmer's perceptions of coexistence between agriculture and large scale gas development, 2014" at gisera.org.au.

Photos of the issue where possible

FAQ on how we did the research

Take home message

Info on how to get the full report if they feel the need for more detail

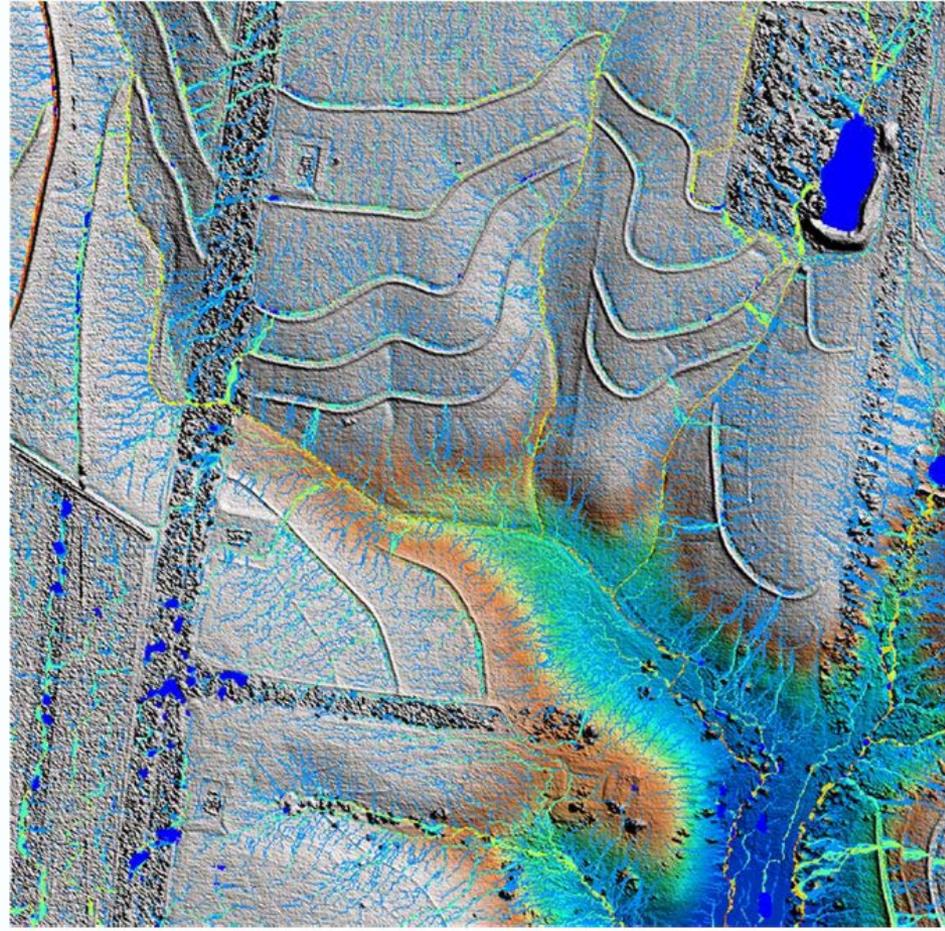
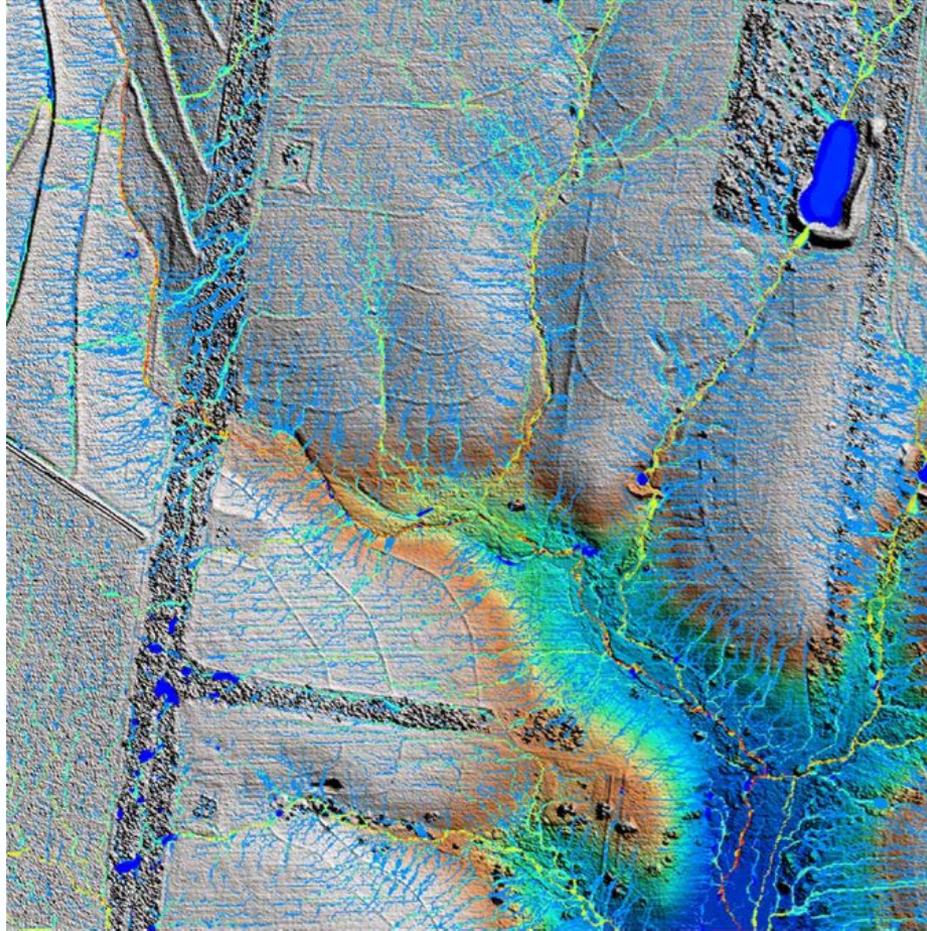
ABOUT GISERA

The Gas Industry Social and Environmental Research Alliance (GISERA) is a collaborative vehicle established to undertake publicly-reported independent research. The purpose of GISERA is to provide quality assured scientific research and information to industry, government and communities, focusing on social and environmental topics including: groundwater and surface water, 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. Visit www.gisera.org.au for more information about GISERA's governance structure, projects and research findings.

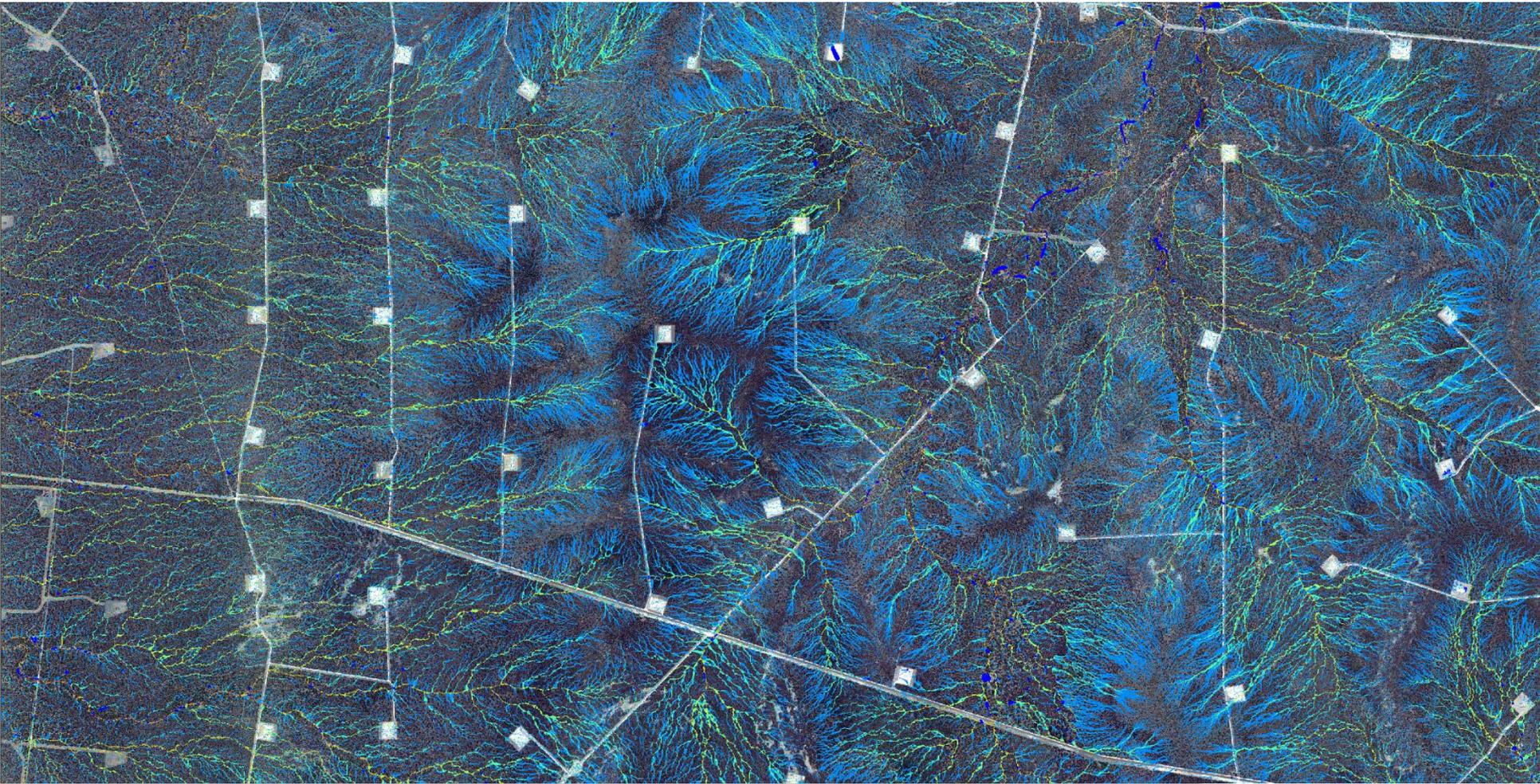
FURTHER INFORMATION: 1300 363 400 | gisera@gisera.org.au

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Changes in Landscape



Changes in Landscape



Telling the Story

Over four days during May and June, our research team set up a research display at two rural events and collected feedback from local attendees.

- **Miles Rural Show** – a one-day local show held May 17, 2016.
- **Farmfest** – an annual three-day agricultural field day held in Toowoomba June 6-8, 2016.

Interaction areas, PC's, PPT presentations, maps, photos, reports, fact sheets, animations, memory sticks full of stuff, business cards, follow farm visits.

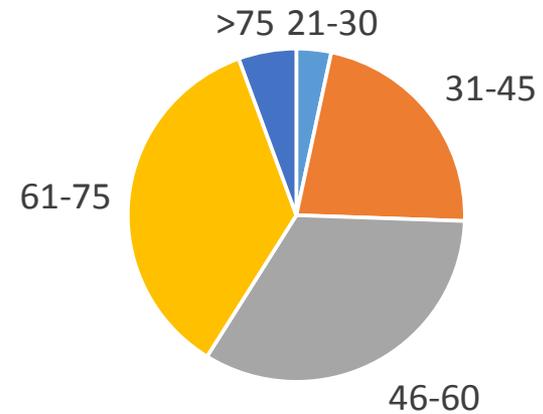


GISERA stand at Farmfest

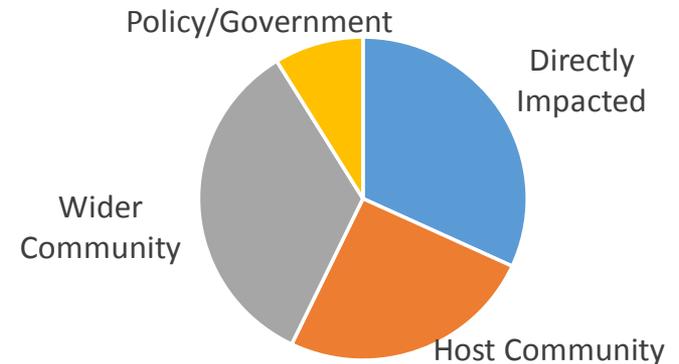
Who did we speak to?

Overall, we obtained feedback from 111 people:

- 79 men and 32 women
- Approximately **two thirds** were **farmers**
- Approximately **one third** comprised a mix of people including:
 - People working in rural areas,
 - People working in the CSG industry (e.g. pipeline construction),
 - Federal, state, and local politicians,
 - Government employees,
 - Local business owners,
 - Retirees, and visitors to the regions.
- Note: self selected sample of people



Age profile of participants



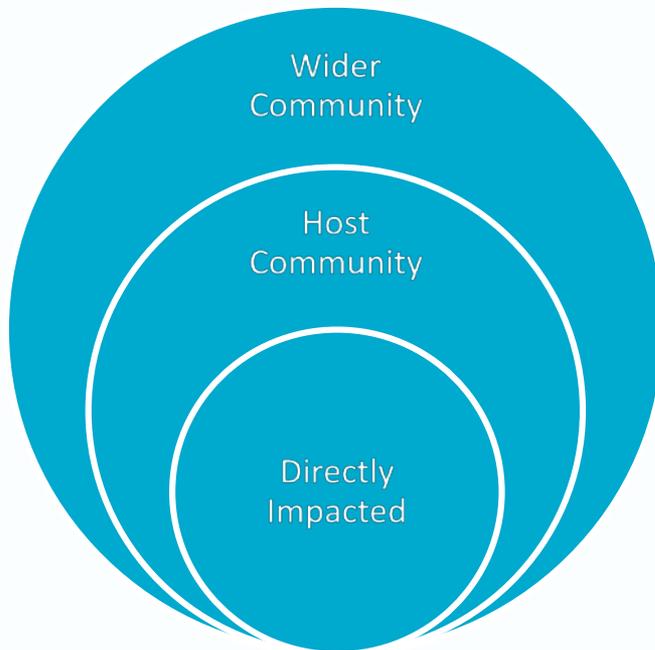
Type of engagement with CSG by participants

Conclusions and Key Messages

What did we learn about our research and methods we use to communicate it?

Conclusions and Key Messages

Message #1 - Consider differing communications needs



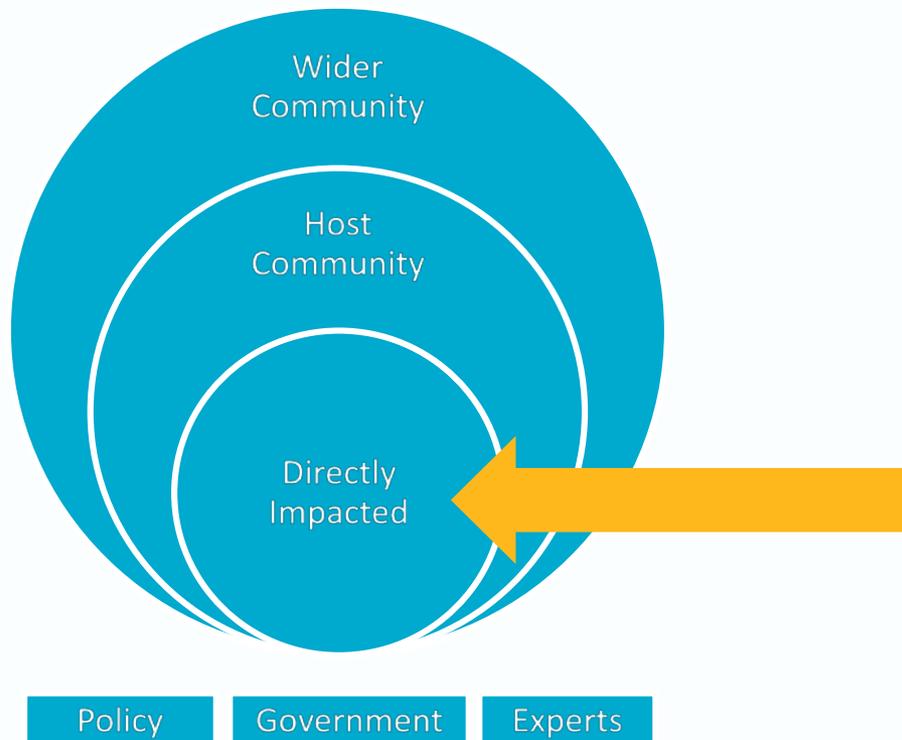
Policy

Government

Experts

Conclusions and Key Messages

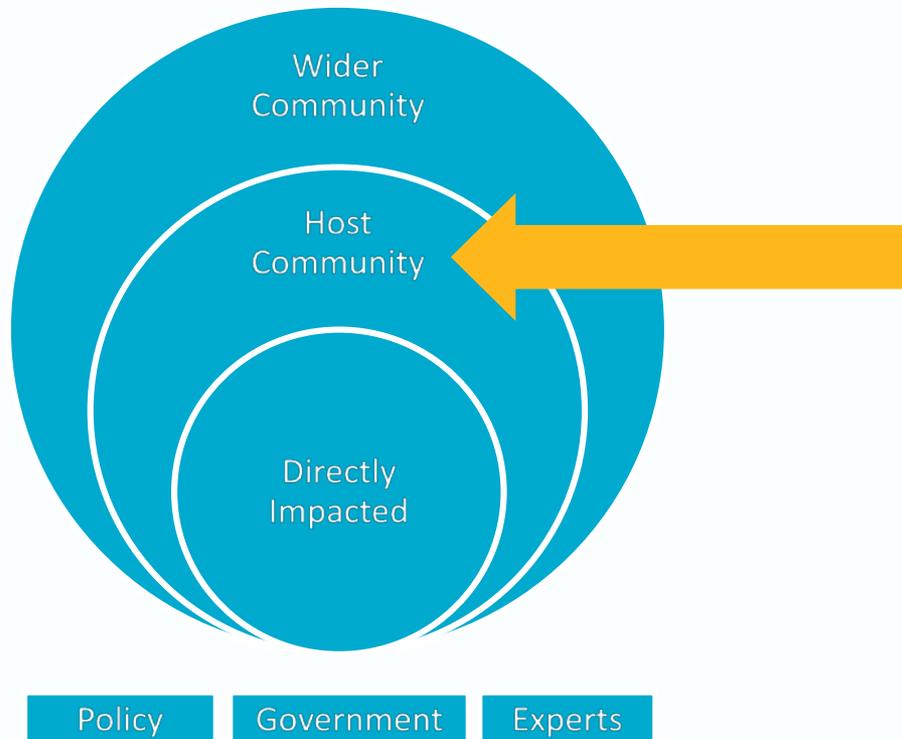
Message #1 - Consider differing communications needs



- Detailed information that could help them with planning, negotiating, and conducting their farm enterprise.
- Interactive information that was able to specifically highlight their own situation was found to be highly valuable.
- Delivering this information one-on-one or in a problem solving approach was valued by the farmer.

Conclusions and Key Messages

Message #1 - Consider differing communications needs



- Scientific information, information monitoring changes, and information on ‘what’s happening?’ particularly in relation to the future for their region.
- Expectation that the science and monitoring research would be considered by government and would inform industry standards and government policy.
- The level of engagement from this group was heavily influenced on whether or not they were currently impacted.

Conclusions and Key Messages

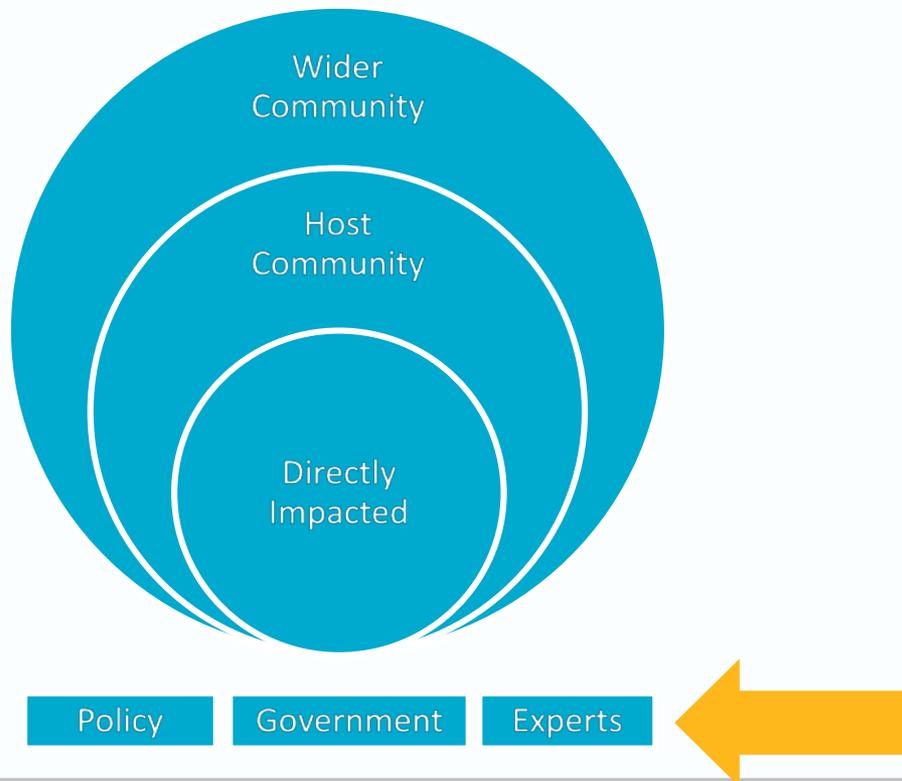
Message #1 - Consider differing communications needs



- Engage at a more superficial level.
- Interested in the science but wanted simple messages that were easy to understand and not overly complex.
- This audience also involved children who were seeking information for school projects.

Conclusions and Key Messages

Message #1 - Consider differing communications needs



- Interested in the quality of the data, the sample used to collect the data, and the robustness of the science.
- Often identified other areas in which research may be relevant and they considered the wider impact of the science.

Conclusions and Key Messages

Message #2 - Help people to engage with information on their own terms

- People will not readily trust information that appears to come from a party that is biased in their assessments.
- Information presented in a neutral way builds confidence in the information provider, and allows the person to engage in the discussion and come to their own judgement.

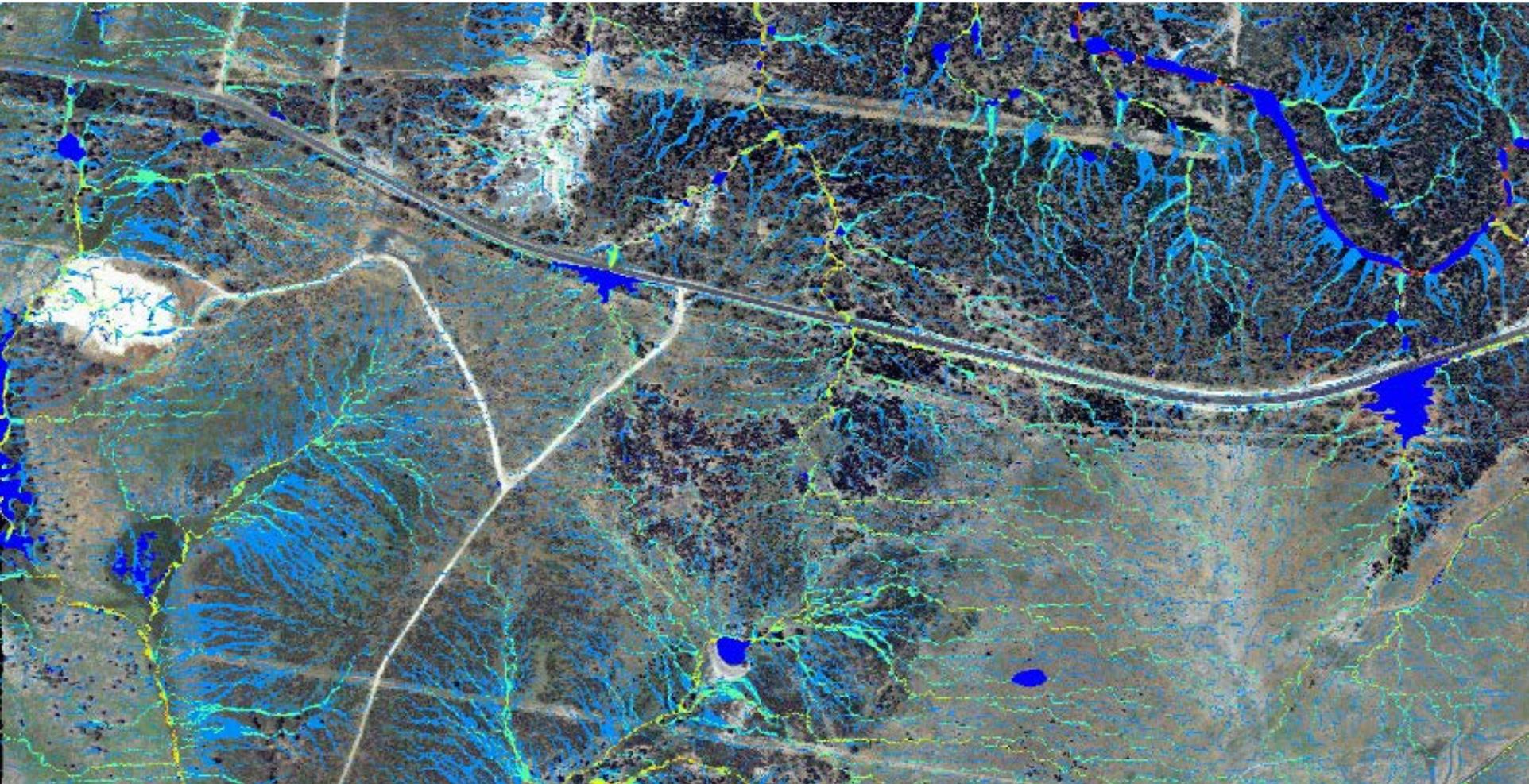
Conclusions and Key Messages

Message #3 - Visual aids to help people to interpret and process the problem

- Visual aids help to address the previous issue.
- The use of animations, maps, visual aids help to
 - Include the participant within the process of interpreting the data directly
 - Empowering the individual to make their own judgements
 - Helping them to communicate their thoughts with others.

Conclusions and Key Messages

Message #3 - Visual aids to help people to interpret and process the problem



Conclusions and Key Messages

Message #4 - Little things help a sustainable long term relationship

- Trust in CSG companies as capable operators is undermined if CSG companies or their operators/contractors continue to make simple mistakes.
- Taking advantage of local knowledge from farmers not only supports a better outcome but also enriches the relationship, indicating to the farmer a mutual respect and a preparedness to learn.

Conclusions and Key Messages

Message #5 - CSIRO is a trusted advisor in this industry

- CSIRO continues to enjoy the trust of community.
- However, community members have reiterated the need to continue ensuring that mechanisms safeguarding research independence are maintained.

Conclusions and Key Messages

Message #6 - Future research opportunities in new regions and industry phases

- Community members are keen for research to be extended into new geographical areas such as the CSG development areas around Wandoan.
- The community is also keen for research to commence sooner rather than later
- Need to address new issues arising from the CSG production phase, and future issues regarding eventual decommissioning of the industry.

Conclusions and Key Messages

Message #7 - Continue to address the uncertainty

- There is a need to focus research efforts and communication on helping to address the uncertainty around CSG and its impacts.
- Research updates that collate the latest research on key areas of uncertainty such as well integrity and ground water connectivity would help to address the more widely held concerns of communities.
- Such review papers could help to dispel myths that may develop to fill knowledge gaps, and which create anxiety within CSG communities.

Conclusions and Key Messages

Message #8 - A valuable touchpoint with the community

- The researchers have found such a level of community engagement to be of great benefit in understanding issues arising from their research, and methods for better communicating with important sectors of the community.
- Similarly, many participants expressed their gratitude for being able to speak with the researchers directly.
- Such interactions should become a regular part of GISERA's research communications agenda.

Thank you

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