



THE UNIVERSITY OF  
**NEWCASTLE**  
AUSTRALIA

# **Local Attitudes to Changing Land Use – Narrabri Shire**

**Summary Report**  
**December 2016**

**Michael Askew**  
**Hedda Haugen Askland**

# Local Attitudes to Changing Land Use – Narrabri Shire

Summary Report, December 2016

This research project is funded by the NSW Department of Primary Industries (NSW DPI) and The University of Newcastle (UON). The project is a collaborative social research project between the two funding partners, conducted by researchers from the Centre for Social Research and Regional Futures (CSRRF) and the Centre for Urban and Regional Studies (CURS), which form part of UON's International Centre for Balanced Land Use (ICBLU).

## UON Research Team

Dr Michael Askew (Project Director)  
Dr Hedda Haugen Askland (Chief Investigator)  
Dr Julia Coffey  
Dr David Farrugia  
Dr Jo Hanley  
Dr Meg Sherval  
Dr Steven Threadgold

## DPI Research Team

Liz Rogers (Project Director)  
Alex Wells (Demographic analysis; Narrabri profile)

## Project Steering Committee

Dr Michael Askew, CSRRF  
Dr Hedda Haugen Askland, CSRRF  
Dr Alan Broadfoot, NIER  
Dr Gerry Bobsien, NIER  
Dr Phil Wright, DPI  
Liz Rogers, DPI  
Kate Lorimer-Ward, DPI

## Citation details

Askew M, Askland HH. 2016. *Local Attitudes to Changing Land Use – Narrabri Shire. Summary Report*. December 2016. Newcastle, NSW: The University of Newcastle, NSW Department of Primary Industries

## Corresponding authors

Dr Michael Askew, Project Director CSRRF, Faculty of Education and Arts, The University of Newcastle, Callaghan NSW 2308, Australia. E Michael.Askew@newcastle.edu.au / T +61 2 4921 7324  
Dr Hedda Haugen Askland, Research Lead CSRRF, Senior Lecturer School of Humanities and Social Science, Faculty of Education and Arts, The University of Newcastle Callaghan NSW 2308, Australia.  
E Hedda.Askland@newcastle.edu.au / T +61 2 4921 7067

Front cover design: Carla Torell; image: Hedda Haugen Askland

Text design: Hedda Haugen Askland

Images: Jo Hanley

Report template: UON Marketing Resource Centre

This project has been approved by the University of Newcastle's Human Research Ethics Committee, Approval No. H- 2015-0193. All data contained in this report have been through a process of deidentification and no real names are used.

# Local attitudes to changing land use - Narrabri Shire

A collaborative research project between The University of Newcastle and the NSW Department of Primary Industries

*Land-use conflicts have some inherent characteristics that make them difficult to deal with. On the one hand, land-use decisions involve complex natural systems and processes, long time scales, and uncertainty. On the other hand, land-use decisions are often felt on the regional and local levels, which encompass heterogeneous political, cultural, and societal systems. These are often influenced by suprarregional forces like globalization and broader societal trends, for example, demographic changes, and may substantially differ in their local institutional contexts (Mann and Jeanneaux 2009: 121).*

**Rural and regional New South Wales (NSW) have traditionally been defined by the relatively harmonious coexistence of competing land uses. Agricultural, manufacturing, service and mining sectors have long operated side-by-side to underpin the economic diversity of rural and regional areas and provide the foundation for community well-being and identity. More recently, however, there has been significant re-orientation of these landscapes, and this has had a deleterious effect on community cohesion.**

International demand for coal, coupled with the emergence of the coal seam gas (CSG) industry in NSW and Queensland, has seen increasing competition for land and generated new challenges for rural and regional communities, industries and governments. For communities with a largely agricultural heritage, this marked shift in land use intensity towards extractive activities poses particular problems given perceived threats to the natural resources upon which agricultural production is dependent. Consequently, rural and regional spaces have become increasingly contested domains, characterised by transformations in established relationships between local communities, governments, industry, and non-governmental actors.

Despite developing policies seeking to better balance competing land uses and implementing a Strategic Regional Land Use Plan for the New England and North West (NSW Government 2012a, b), land use disputes, tensions and conflicts remain pervasive. A wave of protest and civil disobedience has marked the political debate over the past 12 months, with environmental activists and their supporters becoming

increasingly vocal at both local and state levels—most notably around the CSG issue.

Narrabri Shire is one of many local government areas in NSW that has experienced a re-orientation of land use towards extractive activities. Narrabri, located in the north-western part of NSW, is an agricultural community that





has endured significant land use change over the past 50 years—including the introduction of the cotton industry and the advent of genetically—modified (GM) cotton. Whilst these developments generated considerable concern in the community at the time, the recent expansion of coal mining and CSG exploration in the Shire have engendered considerable conflict between those who see the extractive industries facilitating continued economic diversity and those that see these activities as a threat to the core agricultural functions upon which Narrabri Shire is founded.

With a population of approximately 13,000 residents, it is a relatively small community. Nevertheless, Narrabri is a community marked by different interests and concerns, with both large and small agricultural producers, a variety of agricultural products, diverse research facilities, extractive industry projects, parks of national and state significance, and a rich aboriginal heritage. As such, Narrabri offered fertile ground for exploring how people form attitudes to land use change.

This study explores the social, cultural and economic processes that shape community attitudes towards changing land use in the Narrabri Shire. Through a qualitative methodology, the project set out to:

- analyse attitudes to changing land use and how such attitudes are aligned with various socioeconomic variables and historical experiences of land use change;
- gain an in-depth understanding about local conceptualisations and experiences of land use change;
- advance existing knowledge about how local residents make sense of changing land use, including how land use forms part of people's sense of self and sense of place, community and identity;

- identify significant changes, cumulative impacts and 'tipping points', and when land use change becomes an issue of concern that triggers individual and/or collective responses;
- determine what government can do to support the ongoing viability of regional communities in the context of changing and competing land use patterns;
- inform future community consultation and engagement practice.

Data was gathered through semi-structured interviews with 51 local stakeholders (residents) and 14 key stakeholders (planners and policy makers, decision-makers and representatives). In total, 38 men and 27 women participated in the study and the sample was skewed towards those in the older age brackets (45 and older). The majority of the participants had a long-standing history with Narrabri, with many being at least second generation. Most of the interviewees lived in either Narrabri or Wee Waa, with some participants from the Pilliga, Boggabri and Baa Baan areas. No indigenous representatives were interviewed despite significant efforts at recruiting representatives from the indigenous community. The final sample included individuals from agriculture, business, professional services, mining, government, the services sector, public advocacy, and community services, along with retirees, students, and those with domestic duties. All interviews lasted between 1-3 hours and were conducted at a time and place convenient to the participants. All data has been deidentified and no real names are used in this report.

Key themes that emerged through the analysis include: place and place attachment; land use change, soil and water; co-existence, proximity and reciprocity; knowledge, risk and trust; and government and governance.

## Place and place attachment: personal connections, community dynamics and changes in land use

*...it's very hard to describe. It's a special place. A place where you feel safe. It's just that special place in your heart, and certainly where we are, we love where we are, and we're very passionate about agriculture. We love that we are farmers. We're very proud to say that we are farmers and that we tend the land, and it's providing food for people (Caitlin, Narrabri farmer).*

*I guess the CSG debate has polarised communities into farmers and people who feel some risk...if you engage in a conversation about what you're worried about, quite often people get their backs up straightaway, like it's kind of like two polarised camps...I guess that's where I see the community sort of tearing apart at this moment in time (Kathy, local resident).*

**Narrabri is a traditional agricultural community, and its history is entwined with the growth of the cotton and wheat industries. Local residents maintain a strong attachment to a specific vision of life in Narrabri, which emphasises its rural character. Local residents describe Narrabri as a unique place, harmonious, egalitarian and close knit. This idea of Narrabri as a place is central to the formation of attitudes towards changes in land use, regardless of what these attitudes may be.**

The significance of personal connections to Narrabri for the formation of attitudes towards land use is key to grasping how change affects community dynamics. Local residents perceive Narrabri as a unique community both socially and economically, and this uniqueness reflects the structure of the local economy and the activities that local residents carry out on the land. The vision of life in Narrabri is commonly one of community cohesion underpinned by economic diversity. Whilst this overarching idea of Narrabri as 'a place' exists, different community members interpret this in various ways. If changes are seen to threaten personal visions and attachments, then individuals are likely to form negative attitudes towards these changes.

The connection between definitions of Narrabri, local community attachments, and land use draws attention to the critical significance of the meanings that residents attach to their local *place* and the way that these meanings interact with the use of natural resources. Essentially, definitions of place are mediators of attitudes towards changing land use; local residents' attachment to place are key to their definitions of themselves and the lives they perceive as possible for themselves. When locals describe Narrabri as a traditional and dynamic agricultural region, they are also binding their own expectations of the future to that vision of place. Any significant changes in land use across the Shire will transform local places—through changes to landscapes, social networks,

and local economies— and, subsequently, alter the basis on which people's sense of self is founded.

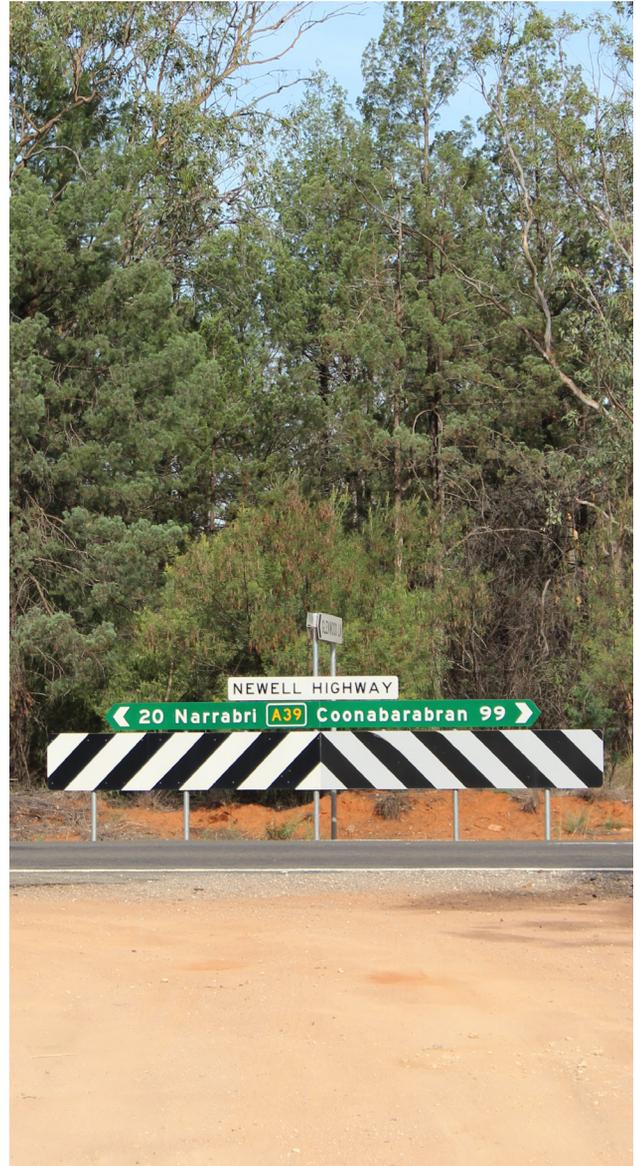
The intensification of the extractive industries and the introduction of CSG are particularly sensitive topics in this regard. This sensitivity is not simply a matter of scientific debate about the environmental impacts of the extractive industries, their potential affect on agricultural productivity, or their social and health impacts; it is closely connected to the experience of changes to social dynamics and an increasing contestation about the meaning of Narrabri as a place.

The role of place and place attachment in shaping local attitudes to changing land use should be understood in relation to how places are imbued with meaning; Narrabri is not simply a geographical, bounded area, it is more importantly a place that individuals assign various connotations to—'agricultural', 'resilient', 'close-knit', 'prosperous', 'peaceful'. The current land use changes and increased multifunctionality of the Narrabri landscapes bring forth questions about what Narrabri, as a place, is all about. It is no longer straightforward to identify with Narrabri as a rural, harmonious community; disagreement about what should be the role and place of extractive industries is straining social relationships and, accordingly, changing the dynamics of everyday life and experience of community.

For some, the increased local prominence of coal and CSG is seen as an asset to the Shire and a factor that will contribute to the region's economic resilience well into the future. This is built upon a narrative of economic diversity as one of the Shire's strengths. Indeed, economic diversity is a commonly held ideal of the Shire, regardless of one's position in relation to land use changes. Divergence occurs in perceptions of how coal and CSG influence Narrabri as a place. When individuals define Narrabri as 'economically diverse' but with 'future vulnerabilities', support for the extractive industries tends to follow. When

individuals define Narrabri as a 'strong agricultural community connected to the land', opposition to extractive projects inevitably manifests. This last cohort sees coal and CSG as a short-term temptation and a distraction from building long-term, sustainable land use practices centred on the agricultural capacities of the Shire.

With the growth of coal and CSG in the Shire, the local community has been split into three distinct groups —those in support of extractive projects, those against, and those who are unsure how coal and CSG will shape Narrabri as a place. Importantly, this fragmentation of the community affects the way locals socialise and what is spoken about in social settings. The disparate views on the role of the extractive industries for the local economy, its social impacts and environmental risks cause heated debates and social ruptures. As a consequence, discussion of coal and CSG and their influence on Narrabri often becomes a 'no-go zone' amongst friends and associates; a cultural code of politeness and respect implies that, if social relations are valorised and seen as important, then the topic of coal and CSG will not be discussed. The intensification of the extractive industries is, thus, changing local resident's everyday experiences of Narrabri as a place and their definition of Narrabri as a cohesive community. Whilst other land use changes are taking place within the Shire—such as a decline in the traditional family farm and increased mechanisation of agricultural work—the land use changes occurring through intensification of coal mining and the emergence of CSG dominate local narratives about changes to place.



### Key findings

- Attitudes to changing land use are formed through the prism of local residents' definition of Narrabri as a unique place and the personal attachments they form to these definitions.
- Regardless of their attitudes to changing land use, local residents express a commitment to a future of Narrabri that accords with the values of community cohesion and social diversity.
- Definitions of Narrabri are destabilised by the intensification and expansion of the extractive industries. The mining boom and the introduction of CSG pose a challenge to the meaning of Narrabri as a rural place.
- Differences between landowners and townspeople may be expressed in attitudes towards the extractive industry that define Narrabri as an agricultural community, and political activism or social resistance against the extractive industries may change community relationships in ways that threaten actual community cohesion.
- Land use changes, in particularly those introduced by the extractive industries, reshape the nature of Narrabri as a local place. Community members respond to these industries in ways that reflect their personal commitment to the uniqueness and vitality of their local community.

## Place and place attachment: key implications

Theme	Issue at stake	Local implications	Implications for government
<b>Community cohesion</b>	Narrabri is defined as a traditionally cohesive and inclusive community by its residents. This is a key value in Narrabri. The intensification of the extractive industries is destabilising and creating new, potentially conflictual relationships due to changes in the economic and social basis of the town.	Locals are forced to actively manage their relationships with others in order to avoid conflict. Some residents feel socially isolated. The key value of cohesion as a definitive feature of the Narrabri community is threatened.	If changes in land use threaten the community value of social cohesion there is likely to be resistance to these developments. Government should seek to understand local perceptions of place and place attachment and consider the impact of land use changes on community cohesion when assessing the social impact of land use developments.
<b>Economic diversity</b>	Narrabri is defined as an economically diverse place. This diversity is a key value in Narrabri because it is seen to underpin the future of the community at a time when other rural places are experiencing economic decline.	When one industry operates to the perceived detriment of others, the social value of economic diversity becomes questionable. For some residents, the link between the economic viability of Narrabri as a whole and its ability to sustain them and their families as individuals is broken, and this threatens their sense of the future.	If changes in land use that provide economic diversity are seen to undermine the viability of existing economically sustainable land uses, community members are likely to voice opposition. Government should weigh up both individual and sectoral livelihoods and intergenerational sustainability alongside a whole region approach to deliver fair and reasonable economic benefits to the entire community.
<b>Place attachment</b>	Community members perceive Narrabri as a unique and special place. They express a strong place attachment to their local community. Their attitudes towards land use are expressed from the perspective of this place attachment and the significance of their relationship to the land.	Community attitudes towards the extractive industries go beyond abstract economic or environmental concerns. These attitudes reflect the deep personal attachments that people have to place and community.	Changes in land use are challenging some people's sense of place and leading to fears for the future of Narrabri as an agricultural community. Government should work to ensure that competing visions for Narrabri are acknowledged and that place attachment is recognised as an essential part of human experience that must be taken into consideration in planning processes.

## Land use change: the contest for water and soil

*When farmers see the risks outweighing the benefits, then, logically, there's going to be concerns. They're a risk averse bunch. If they see the risk outweighing the benefits, then there'll be problems* (Graham, Narrabri farming agent).

*...the last thing I want is the Great Artesian Basin to be bugged. When you talk to people out there, go out there in the drought and their dams are dry. The only water they've got is that. Their whole life is dependent on that staying good* (Vera, retired grazier).

**Localities are complex domains often shaped by competition and conflict. Local histories are marked by decisions about what resources are explored and exploited, who has access to such resources, and how landscapes are conserved or utilised. Land uses are intimately tied to people's ideas of the relationship between humans and their natural environment. Where that relationship is acutely dependent (such as in agricultural communities), changes in land use are intensely scrutinised to ensure the relationship is not jeopardised. In the Narrabri Shire, the meaning of land and the relationship between the land and its inhabitants underpin local attitudes to land use change. People articulate a sense of a 'resource hierarchy' where water and soil are the ultimate assets that must be protected. Assessments of the value of diverse land uses and land use change follow this hierarchical logic.**

Scarcity, stewardship and sustainability are three themes that help explain local attitudes to changing land use within the Shire. *Scarcity* relates to the perception of water and soil as being vulnerable resources. Local residents, particularly farmers and landholders, express a

distinct responsibility to protect these scarce resources through their role as *stewards* of the land. Water and soil are the touch-stones that connect all facets of life and, as such, are non-negotiable and must be preserved for the well-being of present and future generations; thus embedding the notion of *sustainability* as a measure for balancing present and future needs.

Local residents emphasise two particular land use changes occurring within the Shire at the present time:

- changes within the agricultural sector resulting in new farming practices; and,
- intensification of coal mining and the emergence of CSG.

The former is limited in its impact but is a primary concern of farmers. It relates to increasing farm sizes and the decline in the traditional family farm, coupled with increasing competition for limited resources and global market pressures. In contrast to the intensification of extractive activities, changes in the agricultural sector do not translate into distinct attitudes for or against the change. Rather, the technological advancements and increasing globalised nature of agriculture translates into anxieties about the





intergenerational transition of the family farm and future transmission of knowledge and farming ethos (succession). Embedded in this is the idea of an intergenerational connection to land and, subsequently, an interest in maintaining the quality of the land and its life-giving capacities as transmitted from the past, through the present and to the future. Herein lies the notion of stewardship and the intergenerational responsibility to nurture past heritage for future generations through present agricultural practice and innovation.

Stewardship, in its simplest form, is linked to words denoting care and responsibility such as 'custodian' and 'guardian'. Stewardship has come to be associated with the environmental movement through natural resource management, with a particular emphasis on the possibility of ethical relationships between humanity and nature. Many of the local farmers in the Narrabri Shire express a sense of being 'ecosystem managers', holding particular responsibilities for

not only maintaining the quality of soil but also ensuring its longevity. Importantly, stewardship is not simply a matter of conservation and protection of the environment; in contrast to environmentalists or others who emphasise the need to maintain an ethical relationship to the natural environment, the farmers' livelihoods are closely interconnected with being 'ecological citizens' who base their farming practices upon the notion of sustainability.

This is important as farmers themselves have been accused of non-sustainable practices. The cotton industry, for example, has always been recognised as a 'thirsty crop' and, when cotton first came to the Shire in the 1960s, it was seen as a significant threat to existing agriculture and the environment as it was a competitor for water and a big user of chemicals. Yet the present day alignment of 'stewardship' with environmentalist values in the Narrabri Shire has emerged in response to what is experienced as an 'antagonistic other'—the extractive industries in

general and the CSG industry in particular. These 'outsiders' are perceived to present significant threats to the all-important Great Artesian Basin, ground water and soil quality. Whilst the growth of the agricultural sector over the past four decades has generated significant land use changes, these changes are articulated as emerging from within the industry itself. Conversely, the present land use change through extractive projects has emerged from the outside and represents interests that are not embedded in the community.

Herein lies a key to understanding the opposition to CSG and coal mining within the Narrabri farming community: safeguarding soil and water is about securing the competitiveness of their farms, which is essential to the continued ability to grow food and other essential products into the future. This is articulated as an issue that goes beyond self-interest and is emphasised as being of long-term local, regional, national and global importance.

Many of the participants interviewed for the project are not categorically opposed to mining and CSG extraction; they recognise the imperative for energy security. For locals, however, this should not compromise the quality and supply of soil and water. The Pilliga Gas Project presents a particular predicament in this instance. Many of the participants suggest that the Pilliga is 'useless scrub land' and, as such, the best place to have CSG exploration if it is to occur within the Shire. The Pilliga is described as a zone worth sacrificing given that it is not being used for agricultural production or part of the fertile Liverpool Plains. For other participants, the interconnectedness of natural resources and the potential threat to water systems drives opposition to the Narrabri Gas Project. Thus, the resource

hierarchy related to soil and water here presents a particular paradox: on the one hand the Pilliga can be sacrificed due to its limited agricultural potential ('poor quality soil'), yet the underground water resources require safeguarding and, subsequently, the Pilliga must be protected to ensure the viability of the shared water resources and resilience of the local agricultural economy.

The idea of the Pilliga as a sacrifice zone is very different to environmentalist and conservationist concerns about protecting the Pilliga for its particular delicate ecosystem. Nonetheless, an unconventional alliance between farmers and environmentalists has emerged over the past decade. Most of the farmers who took part in this project expressed concerns that CSG extraction will adversely impact agriculture through its impact on the environment and, subsequently, impact the mental and physical health of local residents, the lifestyles and wellbeing of local communities, and local amenity and sense of place. Accordingly, local farmers and environmental activists today find common ground and meet within a social platform that emphasises biospheric and altruistic values, sharing knowledge and gaining increasingly closer ties and ideals. Previous research (e.g. Colvin, Witt and Lacey 2015; de Groot and Steg 2007) have found that these types of values emerge in situations of conflict; that is, when there is an issue that forces a categorical decision one way or another. Whilst there was a group of people in the Shire who were undecided on the relative merits of extractive industries (particularly CSG) most participants articulated a clear decision to support or oppose the extractive industries and this decision was made to the exclusion of the other.

### Key findings

- Emerging within local discourses are longstanding debates that recognise an increased interconnection between rights to land, rights to water, and anxiety over the loss of healthy soils. These debates are paralleled with increasing concerns about larger issues such as climate change and global scarcity of resources. They manifest in perceptions of local farmers and landholders as stewards or guardians of the land.
- Opposition to land use change for coal and gas exploration is underpinned by valorisation of water and soil as non-negotiable resources that sit at the top of a 'resource hierarchy'. Any land use changes that threaten these resources are challenged as they are seen to jeopardise the present and future wellbeing of local communities and long-term economic security. Local opposition or support for land use changes will reflect how they evaluate associated risks to water and soil.
- Local farmers and landholders see agriculture as an industry that has proved it is a stalwart that can be maintained long into the future, unlike other industries. The temporality of the extractive projects and the 'short term gains' for 'long term losses' are central to people's evolving attitudes to new industry projects.

## Land use change: key implications

Theme	Issue at stake	Local implications	Implications for government
<b>Precious water</b>	Water is a highly valued resource that is seen as being threatened by changing, intensified and competing land uses. The identified need to protect local water sources, the cornerstone of local agricultural activity and community sustainability, underpins local attitudes to changing land use.	If water supply and/or quality is jeopardised so too are the livelihoods, identities, and futures of many Narrabri residents. Impact on water is the key criterion for assessing the relative merits of particular land uses, and guides local decision-making and attitude formation around them.	Just as water sits at the top of the 'resource hierarchy', so it should also sit at the pinnacle of government policy and planning frameworks. Government could facilitate dialogue addressing the science, experiences and stories around water use to mitigate sectoral dissonance and perceptions of inequitable water allocations.
<b>Sacred soils</b>	Sitting with water at the top of the 'resource hierarchy' soil health and the risk of contamination act as drivers for attitude formation on land use changes and impacts.	Perception of risks to soil quality catalyses contestation and crystallises opposition to the source of the threat, which may come from within the agricultural sector itself (e.g. pesticides) or other industries.	Soil health must sit alongside access to quality water at the top of policy and planning frameworks. Risks to soil, particularly on strategic cropping land, must be a priority for government.
<b>The future of the farm</b>	Contemporary farming represents a significant departure from more traditional forms of working the land, requiring a multiplicity of skills, business acumen and entrepreneurship. Farms are increasing in size in order to be cost effective and profitable.	The increasing pressures of farming coupled with the decreased likelihood of intergenerational farming as youth look for other professional paths have implications for the social sustainability of Narrabri.	Continued corporatisation of land risks the level of care and protection provided by local landholders. Strategies to maintain local farming knowledge and retain youth can strengthen social diversity and skills in the Shire.
<b>Stewardship and unlikely alliances</b>	Farming and land stewardship have become synonymous. Agriculture has come to be associated with the environmental movement through the adoption of sustainability practices and natural resource management. Succession and generational legacies are big picture issues that go beyond the farming family to incorporate productive land as a social good.	Productive agricultural land represents more than just the livelihood of a particular landowner; it also underpins the current and future prosperity of Narrabri as a whole. Local farmers have joined with or emerged as activists to resist resource expansions and operations that pose potentially harmful impacts not just to individual parcels of land but to the whole region.	Recognition required of the growing significance of conflict around land stewardship issues such as soil and water on which the nation's food security and rural livelihoods are based. Local land use conflicts, such as those between farmers and resource companies, resonate beyond the region in which they are located to create powerful momentum for the green movement as a whole.

## Coexistence, proximity and reciprocity

*We've had mining here for quite some time and it's been developing at pace in balance with the other industries. But when you actually have it get out of kilter based on an economic rationale of high coal prices, it doesn't, it loses its balance. I think that's where the issue is; it's not so much about, you know, conflict in land use, it's about what's in balance. What can the local community sustain? What's the tipping point of where communities start to disagree and the fabric underneath has a fracture in it?*  
(Betinna, Narrabri resident).

*...cotton was the enemy. [People saw it as having] the potential to poison babies, that it was making the community sick, that it was poisoning the river ways and the environment with the spraying... You have to look at it in that context, that cotton was seen as the great destroyer of the land and the water some years ago and a lot of the cotton industry are against CSG or pointing the finger for the same reason* (Henry, key stakeholder).

**The question of coexistence has a long history in the Narrabri Shire. Apart from the current tension between extractive and agricultural land uses, the main land use conflict that marks the history of Narrabri is that associated with the arrival of cotton in the late 1950s and early 1960s. The community's ability to get through the contestations of this era is cited by locals as testament to the Shire's resilience and bestows a sense of optimism for the future. There are, however, key differences between the past land use conflict and the current tensions related to the extractive industries, particularly CSG. Cotton was introduced as an expansion of existing agricultural practice, whilst the changes manifesting through extractive industry projects represent an intensification of externally-driven developments. Such intensification or newness does not in itself change agricultural practice but poses a perceived threat due to the competition for similar resources and the possibility of agriculture and social community being a 'casualty of proximity'.**

In contrast to the optimism about the community's resilience and adaptability associated with developments in the cotton industry over the past half-century, the experiences of the latest mining boom underpin scepticism and concern, which translate into often-negative attitudes to land use change through extractive activities. Whereas past experience with land use change provides a sense of fortitude, current experiences are a source of community fragmentation and compromise co-existence between land uses.

Attitudes to and experiences of change will reflect how close individuals are to areas of land use change. Yet, whilst people who live geographically close to a change articulate strong (and largely negative) sentiments to the development, *spatial proximity* is not the only driver shaping attitudes to change. Attitudes

are also shaped by what we describe as *moral proximity*—how closely a proposed change in land use reflects pre-existing moral and political beliefs (such as environmentalist perspectives)—and *socio-economic proximity* (e.g. receiving a salary from mining activities). As noted, Narrabri as a community is split into three groups on the relative merits of extractive activities within the Shire. Those who are 'neutral' are, in general, individuals:

- who are physically distant to the site of extraction (lack of spatial proximity);
- who have had limited exposure to the political and ideological contest underpinning the particular land uses, have limited personal experience of, or exposure to, the land use conflict, and/or whose sense of self remains disconnected from the land use conflict (lack of moral proximity); and/or,
- who are socio-economically independent of the extractive industries (lack of socio-economic proximity).

In contrast, those who articulate a distinct opinion about the extractive projects (whether that be for or against) are people who can be classified as being close to the change, by:

- living within, or close to, the area of extraction (spatial proximity);
- taking a political or ideological stance for or against extractive industries (moral proximity);
- having endured an emotionally-loaded experience of engaging with representatives from the extractive industries (moral proximity);
- having been exposed to, or witnessed, the outcomes of extraction (moral proximity);
- working for or subcontracting to the industry (socio-economic proximity);
- working within the commercial sector and gaining a boost in business through increased population numbers and movement of people



through the Shire (socio-economic proximity); and/or,

- having their livelihood placed at risk due to the land use change (socio-economic proximity).

It should be noted that the distinction between spatial, moral and socio-economic proximity is neither exclusive nor static; individuals who are socio-economically close to the extractive sector, such as employees within the industry, may still live within the project area and hold negative attitudes towards it, and people who are emotionally close may be geographically distant from the activity but still hold an ardent position. The multifaceted and interconnected nature of proximity illustrates how understanding attitudes to changing land use requires a departure from conventional explanations and simplistic interpretations such as NIMBY (Not-In-My-Back-Yard). Whilst the Narrabri residents have a vested interest in 'protecting their turf', this does not in itself explain the processes at play. Being spatially close may result in either support for or opposition to a land use change. Those in opposition to CSG extraction in the Pilliga articulate attitudes that incorporate the notion of NIABY (Not-In-Anyone's-Back-Yard) just as much as NIMBY, highlighting their moral proximity to the issue regardless of geographical location.

Besides proximity, another critical factor shaping attitudes to co-existence is perceived fairness in

cost-benefit distribution. There is a consensus amongst the participants that the benefits of mineral and gas extraction flow across the Great Dividing Range to regional and national centres, but the costs remain the burden of the local community. This collective perception—which was even present in interviews with those ardently supportive of extractive projects—existed despite a number of community engagement programs and sponsorships provided by the main resource companies. Participants argued that there is 'no real return' to the local community and that the companies are not adequately compensating those carrying the costs of the developments. Narrabri is also described as a victim of the 'fly-over-effect', by which there is an increased flow of people through the Shire but limited contribution, financially and socially, at the local level. The existence of two workers' camps was a particularly thorny issue. A number of local residents argued that these camps have created a parallel community and the camps were described as a physical symbol of the mining companies' increased disconnection from the local communities, their needs and desires.

This idea of 'giving back' reflects a key component of the shared ethos of reciprocity. Reciprocity—or the exchange of things for mutual benefit—is here more than a question of economic flow back to the community; it points to an act of 'giving', 'contributing' or 'compensating'

that is accepted and recognised within the social norms and that fits with the cultural tenet of fairness. In the context of the land use conflict in Narrabri, approval and acceptance of extractive projects and their proponents is conceived as a gift that must be earned through counter-gifts. The benefits that flow back to the community must be deemed just, appropriate and fair given the costs that accrue at the local level. Much of the disappointment and tension embedded in the participants' narratives about recent land use changes reflect the sense of broken promises and disavowal of this core moral ethos. The key principle rooted herein is the objective to minimise local inequality. The workers camps and the presence of the mobile workforce are a symbol of the wealth that is generated through local costs, and the very mobility of the extractive workforce symbolises the movement of local resources and values away from the Shire to regional centres, Sydney and beyond. Until the industry can establish a reciprocal relationship with the community that is based on the age-old principle of gifts as total social phenomena, conflict is unavoidable.

Participant reflections on industry efforts at compensating the community for the costs associated with their projects are imbued with a sense of cynicism and scepticism. A number of participants argue that the community engagement programs are merely industry attempts at 'buying a social licence'. The programs result in negative impacts in their own right, creating a 'welfare mentality' whereby previously self-sufficient community groups are transformed into groups expecting and relying on hand outs from coal and gas companies. Some gifts are described as 'failed gifts' that further alienate and disempower the community. An oft-



cited example in this regard is the new swimming centre, which has increased usage costs for local families and maintenance costs for Council.

All the participants in one way or another speak of the moral code of reciprocity as the key to social ties and acceptance of land use change; the divergence within the community and the social tensions surrounding extractive industries rest upon the question of what the social contract guiding the reciprocal relationship should entail, and if the industry is honouring the moral code. All participants agree that industry has an obligation to repay the community for what it gives in the process of changing local land uses.

### Key findings

- Community assessment of projects and land uses is based on a combination of variables, of which an individual's biography, dispositions and experience of change represent important lenses.
- Proximity manifests in Narrabri as a three-fold phenomenon that incorporates spatial, moral and socio-economic conditions. People's awareness of and attitudes to land use change are not necessarily a matter of NIMBY but might rather be reflections of: NIABY; moral, philosophical, ontological or ideological considerations; or socio-economic conditions.
- The code of reciprocity is seen by many to have been undermined, by which residents perceive the local community disproportionately bearing the burden of land use changes whilst the benefits of extractive activities travel across the 'Sandstone Curtain' to regional and coastal areas.
- Co-existence is about balance, fairness, integration and partnerships. Community engagement strategies based on a transactional, outreach approach will have limited success in seeking approval and acceptance from local communities.

## Coexistence, proximity and reciprocity: key implications

Theme	Issue at stake	Local implications	Implications for government
<b>Past experiences of land use change</b>	Perceptions of current land uses and proposed land use changes are based on a combination of variables, of which an individual's biography, dispositions and experience of change represent important frames of reference.	Locals cite the contentious introduction of cotton in the 1960s as a prism through which they interpret current land use conflict and the implications for Narrabri's viability and resilience.	There is no 'one size fits all' approach to land use change and local particularities and historical experiences of such change must be taken into account when seeking to understand the array of community attitudes.
<b>Proximity</b>	Proximity is a three-fold concept that incorporates spatial, moral and socio-economic conditions.	The social impacts of land use change exceed the spatial domains of particular projects. The interlinking of moral and socio-economic variables with spatial proximity mitigates or enhances people's experience of social impact.	The interlinking of moral and socio-economic variables with spatial proximity must be considered when addressing the social impact of existing and planned land use change.
<b>The Sandstone Curtain and the 'fly-over' effect</b>	Narrabri residents express a sense of 'reverse repercussions' by which the local community disproportionately bears the burden of land use change whilst the benefits of these industries travel to regional and coastal Centres.	The reliance on a non-resident workforce and managerial changes within the minerals sector can create a sense of disempowerment for local people who no longer feel in control of the decisions underpinning the current and future well-being of their Shire.	The cumulative effects of diverse land uses, particularly those related to exogenous and large-scale industries, must be carefully considered in the assessment of social impacts. The difference between social change and social impact, as well as the impact of social change, should be better incorporated into government planning policies.
<b>Reciprocity</b>	Land use change taps into a moral dimension that builds on the notion of reciprocity as a total social phenomenon.	Current CSR strategies to compensate the local community for the social impacts of certain industries are based on a transactional approach. Corporate outreach policies, particularly those of the monetary kind, are seen as inducements rather than sincere gifts based on recognition of community needs and desires.	Questions of mitigation and compensation must be carefully considered in the planning assessment process and in the regulation of industries that have identified social and environmental impacts. Opportunities for a dialogue between diverse interests based on needs and desires within the community should be facilitated.
<b>Coexistence</b>	Coexistence is about balance, integration and partnerships. Where coexistence relates to land uses that are regarded as incompatible, locals may express fear or frustration and resort to politicised behaviours.	A sense of imbalance between different industries relying on similar resources has created local tensions between farming and extractive activities and generated significant political debate and activism.	Balance is essential for coexistence, and can be achieved through locally embedded approaches to integration and partnerships that are based on respect for diverse views and interests.

## Risk, trust and the politics of knowledge

*I mean one company tells you one thing and one company tells you another, but you can't find out from the government. The government won't tell you a damn thing (Carl, Narrabri farmer).*

*...when somebody like me flies over the Hunter Valley and sees the dirty great big holes in the ground where there should be some sensible management. It makes me cry. That's an emotive thing as much as anything (William, agri-business).*

**With the growth of coal mining and the emergence of CSG in the Narrabri Shire, conflicts over land use have intensified and questions of risks, trust and knowledge have been raised. The interviews raised questions about local knowledge of land use changes in the Narrabri Shire and primary sources of information. Whilst a number of land use changes have taken place over the past decades, including the changes in agricultural production described earlier in this summary report, participant responses to these questions centred almost exclusively on the issue of the extractive industries, with a particular emphasis on CSG and Santos' Narrabri Project. A key finding of the project is that there are deep ambivalences about what counts as knowledge and truth when it comes to information about these developments, especially in terms of the politics of land use, the influence of certain actors, and the trustworthiness of companies and governments.**

Amongst the study participants, the very idea of what constitutes knowledge and truth is contested. What counts as legitimate knowledge about the risks generated by the recent changes in land use for exploratory and extractive purposes have become important in how individuals view such developments and establish their opinions, and, subsequently, their politics about those issues.

Many of the participants suggested that the specialised knowledge associated with the risks of coal and CSG extraction is usually too technical for the average person to understand. This, in itself, fosters anxiety in people and leads to a widespread view that scientific knowledge does not create consensus or 'truth'. Rather, understandings of science are wound up with politics, PR and spin. Many of the local residents interviewed for this project accordingly expressed significant scepticism about information provided by interest groups, companies and various levels of government; despite assurances that this information is scientific and/ or valid. Similarly, participants who were supportive of the extractive industries were very sceptical to information provided by environmentalist groups and activist

organisations. Both sides of the argument espouse truths for them; however, for those in the middle of the 'information sandwich', deciphering what is valid according to their own position can be extremely complex.

Local residents go through an array of processes to learn about risks embedded in current and proposed land use change. An individual's position on what is 'true' is shaped by their pasts, the way they are treated by providers of information, and their perception of how change will affect their future. Regardless of what position individuals take on changing land use, in one way or another, 'science' is used to legitimise their point of view. People learn about land use issues facing the Shire through a number of different means, including: industry and government led information sessions; media; company statements and media releases; peer-reviewed scientific work published in reports, journals and books; government reports; social media and blogs; social networks and groups; word-of-mouth; and, not least, a wide variety of information available online. Whilst all of these are important in the accumulation of knowledge, the information within these sources will go through a process of interpretation during which the truthfulness of the claims are assessed in line with ideas of morality, sustainability, and local economic vitality.

An important finding of the project is that *witnessing* plays a critical role in validating information for Narrabri residents. All the participants adopt a strategy whereby their developing attitudes and knowledge are endorsed or dismissed through comparison of how claims stack up in relation to what they have seen or what significant others report to have seen. This is part of all land use changes in the Shire but particularly so in relation to CSG. This has to be understood in light of the lifecycle stage of CSG in Narrabri; the Narrabri Gas Project has not yet received Government approval to go ahead and, subsequently, there is no local experience of the direct social, health and environmental impacts of such practices. Knowledge that is paralleled with a sensory or affective experience does, however, have a distinct persuasive force. What people see with their own eyes has considerable effect on their understanding of the world; it turns 'theoretical' knowledge into experiential

confirmation. In seeking confirmation of what might happen in Narrabri through expansion of CSG, a number of the participants had travelled to Queensland to personally bear witness to the impacts. For other participants, their personal experience comes from trips through the Hunter Valley where they saw the impacts of coal mining and could imagine the mirroring of impacts if the industry was to expand in the Narrabri Shire. These journeys and, subsequently the stories about these journeys, have tremendous influence on people's attitudes. For all but one participant, the witnessing led to confirmation of negative impacts and served as a tipping point in the development of their attitudes—moving from being undecided to active opponents. 'The ghost of Queensland' and 'the scars of the Hunter' shadow the resources industry and are central in turning 'a gut feel' into 'truth'.

Where people have not themselves travelled to Queensland or the Hunter, videos from CSG-impacted communities in the US or stories from other affected communities might similarly be influential. However, in contrast to the first-hand experiences, these videos and stories only build an accumulated instinct; it is the embodied experience of land use change and its impact that present the distinct threshold. That being said, the data illustrate how this embodied experience does not have to be held by the individual her/himself; if it is the experience of a significant



other (that is, someone who the individual has a close relationship with and trusts), this might be sufficient to tip the individual's opinion one way or another. This is particularly so if the account about the experience displays what is perceived as unethical behaviour. There are a number of stories circulating within the community that function as 'threshold stories' whereby the perceived trustworthiness of the person telling or retelling the story establishes the validity of the story. Besides stories recounting first-hand experiences from coal and CSG impacted communities, these stories generally depict a breach of cultural values such as honesty and respect. The notion of morality, thus, remains pervasive in the formation of people's attitudes to land use change and their evaluation of trustworthiness and truth.

### Key findings

- The nexus of place, risk and imagined future forms a background for the battle over what counts as legitimate knowledge.
- There are multiple points of view about risk that largely correspond with individuals' positions in the community and their proximity to agriculture and extractives as two distinct land use sectors.
- Individuals garner knowledge in a variety of ways that combine research from a range of sources, witnessing events, and hearing stories from trusted associates.
- There are many sources of information that people struggle with to ascertain how changes will affect them, and there is awareness about the politicisation of knowledge. Regardless of where individuals stand on the issue of land use change, sources from the opposing side of the debate are seen as the product of vested interests and as biased. This has led to heavy scepticism throughout the community, especially towards government, the media and resource companies.
- For many residents, particularly farmers, the ghost of Queensland and the scars of the Hunter Valley hang heavy over their perception about what the future will entail, leaving them to despair about what is to come and to feel let down by those in power around them.
- Witnessing and circulating stories are key tipping points for individuals in the development of attitudes to changing land use. First-hand, affective experiences are significant thresholds in how knowledge is interpreted and how perceptions are transformed into articulated, categorical attitudes to land use changes. These experiences, and accounts of these experiences told or retold by significant others, transform a 'gut feeling' to 'truth', or 'theoretical' knowledge to experiential confirmation.

## Risk, trust and the politics of knowledge: key implications

Theme	Issue at stake	Local implications	Implications for government
<b>Acquiring knowledge</b>	Individuals garner knowledge about issues of concern through a combination of information (which comes from a wide array of sources), witnessing events, and stories from trusted others.	The assortment of contradictory information pertaining to important local issues causes confusion and conflict.	The ability to acquire and generate knowledge is held by all. Navigating through this 'knowledge maze' becomes a key task for local and state agencies. Dismissing local knowledge as myth often serves to strengthen its veracity.
<b>Politics of knowledge</b>	There are many sources of information that people struggle with to ascertain how changes will affect them. People must also negotiate politicised versions of knowledge and navigate the agendas of those who have the power to decide.	The sources of information that opposing sides of a debate use are often seen as the product of vested and biased interests. Local decision-makers and political representatives sometimes claim truth on behalf of a community, which does not reflect all interests.	Information provided by government sources will not be automatically trusted and is often treated with the same scepticism as all other knowledge sources.
<b>The ghost of Queensland and the scars of the Hunter</b>	For many Narrabri locals, particularly farmers, the ghost of CSG in Queensland and the landscape scars of mining in the Hunter affect their perception of what the future holds.	These negative exemplars are causing despair about the fate of Narrabri Shire and their own futures.	Witnessing and collective story-telling are powerful drivers of attitude development. Any contradiction between what one reads and what one experiences reinforces the 'truth' of the latter and the 'bias' of the former.
<b>Tipping points</b>	A tipping point occurs when small changes accumulate to the point of causing a significant shift. Perceptions of contradictions in government information, blame shifting between levels of government, not being seen to be democratically accountable and not representing locals' needs are key tipping points in attitude development.	People become politically activated when they witness events or hear stories that legitimise their position on an issue or when these contradict expectations. Members of the Narrabri farming community have reached significant levels of concern in relation to the impacts of resource operations.	Government needs to better understand the limits of communities dealing with land use impacts that have serious consequences for people's livelihoods and well-being. The validation of knowledge happens through witnessing, experience and circulating stories, in particular when people perceive unethical, inconsistent, and/or dishonest behaviour.
<b>Emotions</b>	'Emotional' responses are often dismissed as being irrational and childish, to be solved by a more 'rational' evaluation of the science, and the onus is on the individual to become more 'knowledgeable'.	For many Narrabri residents, 'rational' science does not adequately address the unknown (such as in relation to groundwater) or the attachments they hold to the land and their genuine fears about irrevocable damage.	Different and competing perspectives must be recognised, and emotional responses must be acknowledged in parallel with rational science.

## Government and governance

*...they [State Government] are not set up for community engagement and they are not set up for advocacy, so any major change you need community engagement so that you can tell them what's going on and consider their beliefs and then you need advocacy, so when you've made a decision, leaders advocate why it's the right decision. State Government aren't set up well to do that on a regional basis. They can do it on a state basis, but they don't do well regionally. So the engagement and the advocacy for open cut mining and for coal seam gas in this region has been done badly by the state. And the ones who could do community engagement and advocacy—mainly the shires—were not involved. The state didn't involve them and say, hey look we can't handle this, can we have your help? They didn't do that (Fred, key stakeholder).*

**Narrabri Shire's transformation from a primarily agricultural region to one that increasingly encompasses coal mining and CSG exploration is both complex and contested. At the nexus of this transformation sits government. State and local government play a critical role in land use change at every stage of the process—establishing planning regulations and policies; assessing the relative merits of projects; determining planning applications and development consent; issuing licences; and providing services to and liaising with communities. As such, the role of government is of critical importance to locals.**

In the Narrabri Shire, the State Government and the Council must navigate governance in a region of increasingly varied and competing sectors with a view to supporting the all-important principles of economic development, community well-being, food security, energy security, water security and environmental sustainability for the betterment of the Shire and NSW. Tension in the community stems from the diverse interpretations of how these principles ought to be realised.

Underpinning participants' attitudes to governance in Narrabri is the perception of an



urban-rural (policy) divide. The idea of such a divide is increasingly apparent where energy and export demands come face-to-face with traditional farming communities. Criticism of the NSW Government was commonly founded on the belief that decisions were made from a city-centric position without much thought for impacts on rural people, especially where mining-related impacts were concerned. The concept of the 'Sandstone Curtain', referring to the Great Dividing Range, was evoked to represent the physical and metaphorical barrier that exists between a Sydney-based State Government and the people of Narrabri. The Sandstone Curtain is seen as a service delivery and communications barrier for government. Moreover, it is viewed as a 'screen' whereby government can approve potentially damaging land uses that would never be permitted in the metropolitan areas, and impacts experienced at the local level are not felt by those in the 'decision-making seat in Sydney'.

Many participants also expressed concern that mining and gas interests are favoured over agricultural interests at all tiers of government and, correspondingly, that mining companies have more influence over government decision-making than farmers. This was largely attributed to the allure of associated state revenue along with potential employment growth and economic multipliers for the Shire. The NSW Government and the Narrabri Shire Council were seen as being closely aligned to coal and CSG companies and many participants saw this alliance clouding planning policy and decision-making. Even many of those strongly advocating for the expansion of extractive industries related concerns about the influence of the sector on governments.

The attribution of preferential treatment for coal and gas companies was extended beyond governments to individual political actors and political parties. Several participants conveyed a sense of 'partisanship' on the part of elected representatives when it came to coal and CSG interests. Criticism was levelled at the 'overt support' offered by the key political actors in the Shire to mining companies. The position of the

National Party was also consistently raised, with a sense that the party had given up on its traditional support for farmers and the agricultural sector and shifted its weight behind further expansion of coal and CSG with the promise of regional jobs and economic growth.

Offsetting the criticisms of current governance practices, several participants (most notably those identified as key stakeholders/decision-makers in the Shire) expressed support for the approach of the Council in balancing community representation with laying the groundwork for the coal and CSG industries. Narrabri Shire Council was perceived by many as doing the 'best it could' to establish a development-conducive environment given its limited decision-making and planning powers. These participants saw Council's role as being fraught; that is, the growing land use conflict around CSG had placed Council in a difficult position where it was destined to upset a large section of the community no matter which stance it took (supporting or opposing CSG). Such positive reflections on the role of government were less apparent when referring to the NSW Government—although there was some recognition (largely from those supportive of coal and CSG) of the State Government's efforts in community engagement and providing stability for industry in advancing projects.

For those participants directly involved in local government or state government agencies, much of the discussion of governance dynamics in the Narrabri Shire centred on the issue of coordination between and within tiers of government. The discussion was underpinned by a perceived failure to adequately coordinate the planning and engagement functions of

government. In this report, we use the term 'metagovernance' to encapsulate this coordinating function. Metagovernance might be thought of as the 'government of governance' (Bell and Park 2006: 63); that is, the frameworks and practices that provide 'oversight, steering and coordination of governance arrangements' (Bell and Park 2006: 66). Metagovernance includes the frameworks that establish: authority and hierarchies in governing across the tiers of government; how resources are allocated; communications and engagement protocols; information sharing; capacity building; and, any functions that set the parameters for planning and service delivery within and between governments. Metagovernance, in this sense, has both a vertical function (coordination and collaboration between the tiers of government) and a horizontal function (coordination and collaboration across government departments). Participants expressed a strong concern about the effectiveness of vertical integration between the State Government and Narrabri Shire Council and horizontal integration across State Government departments.

The Council was perceived as being in a kind of 'bureaucratic void', in which it had relatively no authority or decision-making power but was burdened with various engagement and negotiation functions, along with a fundamental role in the governance of new extractive projects. This 'governance in the gaps' scenario arises out of the failure to establish a framework for integrated planning, engagement and service delivery across the tiers of government. Consequently—whilst performing a critical role at the interface between the state, the private sector and the community—local government operates



without any institutional arrangements to assign responsibilities and accountability. Furthermore, participants believed that the Shire Council was relatively inexperienced in the governance of major resource projects and, with little assistance or knowledge sharing from the State Government or other jurisdictions, was therefore fated to make errors in community engagement and planning negotiations.

Participants also reflected on fragmentation within the NSW Government and the perceived lack of coordination between departments (horizontal integration). There was general agreement from interviewees in the public sector that NSW Government agencies had no effective overarching coordination framework (metagovernance) to ensure collaboration across departments and consistency in engagement with external parties.

When exploring attitudes to governance of land use change in the Narrabri Shire, the discussion invariably came back to participants' perceptions of fairness and rigour in legislative, regulatory and policy platforms. Those supportive of coal and CSG extraction generally felt that the planning assessment process was too cumbersome for proponents, whilst those in opposition felt the process was firmly stacked in favour of proponents and not rigorous enough. This latter group also contended that 'two sets of rules' existed: one for the resource companies and one for everyone else. The concept of inherently unfair planning laws—or, at least, unfair

application of those laws—featured prominently in interviews with farmers, who believed that they face much stricter enforcement of planning and environmental rules than the mining companies do. Those from the agricultural sector also shared concerns about the regulation of water supply, water usage, water quality and soil and water impacts and their role in ensuring regulatory compliance from extractive industries.

General consensus across the research sample was evident in the discussion of stakeholder engagement and local input into planning processes. The data illustrate that people are becoming disillusioned with government (particularly the State Government) with a nearly universal belief that their voices are not heard—no matter what side of the land use debate they might sit on. Government stakeholder engagement practices are perceived as lacking substance and transparency. Many participants allege that the voices of external stakeholders who are not part of the local social structure (but who benefit from the land use changes) are heard over those who live locally. Additionally, participants feel they have little control over matters of local significance, with local farmers expressing a distinct sense of marginalisation from planning processes. Whilst disenfranchisement with government is a commonly held sentiment across regional Australia, the data from the Narrabri Shire indicate a recent fracturing of historical goodwill between locals and government and an increasing sense of abandonment by government of their community.

### Key findings

- Participants' attitudes to governance in Narrabri are underpinned by the perception of an urban-rural (policy) divide. The metaphor of the 'Sandstone Curtain'—referring to the Great Dividing Range—was evoked to represent the physical and metaphorical barrier that exists between a Sydney-based State Government and the people of Narrabri.
- Local accounts reveal a common belief that mining interests are favoured over agricultural interests, a perception that local and state political actors favour mining, and a growing contention that the National Party has abandoned its traditional farmer base. They also indicated some support for Narrabri Shire Council in advancing economic development.
- The State Government is seen to have failed to navigate fragmentation and ensure integration within and between spheres of government. A 'bureaucratic void' exists at the local level, in which local government has relatively little authority or decision-making power but is burdened with various governance functions.
- There are diverse attitudes towards the planning assessment process for major projects; however, the majority of participants evince a sense of unfairness and contend that there are 'two sets of rules', one for resource companies and one for everyone else.
- There is a perception that stakeholder engagement exists but lacks substance and transparency, that governments are not listening to those most impacted, and that locals have little control over significant matters within their region. There is also a sense that the expansion of extractive industries has fractured the historical goodwill that existed between locals and government.

## Government and governance: key implications

Theme	Issue at stake	Local implications	Implications for government
<b>Urban-rural divide</b>	Consensus across the majority of the sample that decisions are made from a city-centric position to the exclusion of rural issues and impacts.	Perception of the 'Sandstone Curtain' separating urban decision-makers from affected rural communities, such as Narrabri, creates feelings of isolation and disenfranchisement.	The notion of an urban-rural divide fuels suspicion of outsiders and cultivates formation of alliances to protect 'the rural', making policy development, planning and engagement in rural areas more problematic.
<b>Perceived alignments</b>	There is a commonly held belief that mining companies have greater influence over government than do farmers. It is said by some community members that agricultural interests are overlooked in favour of mining interests.	Community division and political activism is exacerbated by real or perceived inequities of influence. People are questioning if local debate on land use matters is being undermined by this influence.	Government should be careful to manage public perception and stakeholder relations by operating in a transparent and equitable policy arena.
<b>Political representation is problematic</b>	Support for extractive industries by elected National Party politicians at all tiers of government, to the perceived detriment of agricultural livelihoods and the well-being of farmers, is seen as a failure in representation and a rejection of the traditional voter base.	Political antagonisms are mounting and there is clear evidence that community division is based on those who see extractive industries as the answer to growth and prosperity and those who see the sector and its impacts as a threat to agriculture and the families it sustains.	Government could weigh up decision-making in terms of the broad range of local voices rather than accept the influence of those who claim to represent the community.
<b>Metagovernance failures</b>	Participant recognition of ineffective coordination of land use governance between and within the tiers of government. Local Government left in a 'bureaucratic void' despite their key governance role.	Council is left with relatively little authority or decision-making power yet is burdened with various engagement and negotiation functions that are central to the governance of new extractive projects.	State Government agencies should adopt a cohesive approach to land use planning and conflict. Failures of metagovernance undermine effective governance of land use issues.
<b>Two sets of rules</b>	Belief that two sets of rules exist: one for resource companies and one for everyone else (particularly farmers).	Perceptions of unfairness in the planning system create real and enduring divisions and engender mistrust and a sense of inevitability over outcomes.	Considerable work ought to be undertaken to strike a balance in regulation and policy development around competing land use interests and to ensure fair application of those rules and programmes.
<b>Loss of faith in engagement processes</b>	Local stakeholders have a desire to be involved in decision-making that impacts on their lives but are critical of engagement strategies used by government and/or mining and energy companies.	The ability of local Narrabri stakeholders to engage effectively with government decision-makers and/or extractive companies operating in the Shire has implications for further political action.	Government needs to address these failures by improving the arrangements and outcomes of engagement processes for community stakeholders and restoring their faith in consultative and participatory democracy.

## Conclusions and recommendations

**Land use change does not occur in a vacuum. It is framed by the particular social, cultural, economic, political and natural dynamics that define localities. These dynamics represent filters through which land use changes are interpreted and understood. This project has sought to better understand the process by which local attitudes to land use change are formed within the Narrabri Shire. Key conclusions include:**

**Place matters.** Conceptions of place are critical mediators of attitudes to changing land use. In Narrabri, place is connected to notions of rurality, economic diversity and harmony. Land use changes that are perceived to support or enhance such notions of place are embraced and promoted. Land use changes that are seen to threaten these visions of place—and, subsequently, local people's sense of identity and belonging—will cause tension, friction and conflict.

- **Implication:** Perceptions of place may be relatively consistent across a local community, but be interpreted in divergent ways. In Narrabri, the notions of rurality, economic diversity and harmony are widely-held place descriptors, but the assessment of how land use changes will affect them varies greatly. Policy and engagement around land use change must be founded on a thorough understanding of notions of place and how the change is perceived to impact upon these notions.
- **Recommendation:** Further attitudinal research is required in other regional contexts to create a more holistic picture of place attachments. It is recommended that an expanded project based on the methodology of the current project is conducted in areas with diverse land use issues.

**Water and soil are the ultimate resources that must be protected.** Water and soil sit at the top of the 'resource hierarchy'. They are essential to life and, as such, are non-negotiable and must be protected at all costs. Land uses that are believed to jeopardise these resources are perceived as a threat to the social and economic vigour of Narrabri and a threat to individual well-being. Perceived risks to water and soil represent the ultimate concern for farmers and can push them into overt opposition to specific projects.

- **Implication:** If water and soil are perceived as threatened by unfolding or planned land use change, resistance will exist and will become entrenched in an agricultural community.
- **Recommendation:** The role of water and soil as

long-term resources with life-giving capacities must be recognised and incorporated into policy, planning and engagement platforms. Community engagement strategies that specifically address the contested risks around water and soil should be facilitated. Due to the role of witnessing as a key measure for validity, it is essential that stories from elsewhere and 'proof' brought to the table by community participants are debated and assessed. Avoiding discussion of potential water and soil impacts will leave an information/ knowledge gap that will be filled by other sources, regardless of the credibility of that source or the veracity of their information.

**Attitudes to land use are shaped by spatial, moral and socio-economic variables.** Whilst *spatial proximity* will commonly lead to largely negative sentiments to development (NIMBY), this is not the only driver shaping attitudes to such change. Attitudes are also tightly bound to one's relative *moral proximity* and *socio-economic proximity*. These three modes of proximity cannot be viewed in isolation and people's location in spatial, moral and socio-economic terms is not static. As one's situation changes and experiences of land use expand, so may their spatial, moral or socioeconomic distance to the activity, which in turn may act to transform attitudes.

- **Implication:** Policy makers and planners should not assume that spatial proximity is the ultimate determinant of attitudes to a particular land use change. Whilst the concept of NIMBY can be pervasive, the moral and socio-economic proximity of individuals to change can equally influence attitudes to new developments. Furthermore, the relative effect of the proximity is not static, meaning that changes to 'closeness' induce changes in attitudes.
- **Recommendation:** To better understand how the synthesis of spatial, moral and socio-economic variables manifest and how these best can be addressed, an expanded study of local attitudes to land use change that facilitates comparison of different localities and areas is recommended. This will enable more targeted research on the issue of proximity and its influence on attitudes.

**Local communities become 'casualties of spatial proximity'.** Spatial proximity is not just a determinant of individual attitudes to land use change. In Narrabri, there is a general consensus that the local community is disproportionately carrying the costs of extractive activities and are disadvantaged simply because they are at the centre of impact. There is a sense that the

local community is not getting a 'real return' and that they are being inadequately compensated for the negative impacts the land use changes are having on the local community. A sense of unfairness is unfolding as locals feel benefits flow to stakeholders who do not bear the burden of the developments.

- **Implication:** The perceived inequitable distribution of cost and benefits leave local communities feeling disadvantaged.
- **Recommendation:** Thorough consideration and assessment of *management and mitigation strategies* should be incorporated into the assessment process of new or expanded projects. Projects should, as far as possible, build on local capacity and local expenditure. A 'trickle down' approach is not sufficient and distinct strategies for integration and partnership building should be developed. Further research into how to reduce the 'fly-over effect' is recommended.

**The cultural code of reciprocity demands a fair and appropriate exchange of costs and benefits.** The benefits that flow back to the community from 'hosting' extractive activities must be deemed just, appropriate and fair given the costs that accrue at the local level. Much of the disappointment and tension embedded in

the participants' narratives about recent land use changes reflect the sense of broken promises and disavowal of this core moral ethos. Reciprocity or 'giving back' is more than a question of economic flow and financial compensation; it points to an act of 'giving,' 'contributing,' and 'compensating' that is accepted and recognised within the social norms of the community.

- **Implication:** Until proponents and governments can establish a reciprocal economic and social relationship with affected communities, conflict will exist.
- **Recommendation:** To coexist, the principle of reciprocity as the articulation of everyday morality must be incorporated into strategies for compensation and mitigation of social impacts. When seeking approval and acceptance of new or expanded projects, a contractual or relational approach—rather than transactional approach—must be adopted.

**Knowledge and scientific 'truths' are contested.** The nexus of place, risk and imagined future forms a background for the battle over what counts as legitimate knowledge. Different sources regularly provide conflicting information about the risks and benefits of land use change (in particular coal mining and CSG extraction). These sources often hold specialised knowledge and



are usually too technical for the average person to understand and information is commonly wound up with politics, PR and spin. The politicisation of knowledge and the subsequent uncertainty associated with technical science leads many local residents on their own fact-finding missions.

- **Implication:** The contested nature of science and knowledge means that scientific knowledge is not necessarily interpreted as truth but may just as easily be seen as PR or spin.
- **Recommendation:** The role of 'independent research' is essential when negotiating a contested field. Local residents believe that this is largely the role of the State Government but, as long as the State Government is seen as being disproportionately influenced by one sector over another, scepticism and cynicism to Government material will exist. Independent research that avoids being dismissive of local concerns, and that is commissioned without fear of outcomes, is likely to assuage uncertainty in the community.

**Witnessing and circulating stories hold a validating force and transform 'gut feelings' to 'truths'.** With the increased sense of uncertainty of 'scientific facts', *witnessing* and *circulating stories* become particularly persuasive. Witnessing refers to a commonly adopted strategy whereby local residents endorse or dismiss their evolving understanding through comparing it to what they can see with their 'bare eyes'. Circulating stories are testimonies removed from their original source, told and retold within the community as 'truths'. The familiarity of the source, coupled with the retelling of these stories by significant others (friends and family), make them 'threshold stories' that are used to validate or falsify other sources.

- **Implication:** When first-hand accounts contradict technical evidence and when stories begin circulating throughout the community, science is questioned and trust builds in those espousing a contrary position. Dismissing eyewitness accounts and stories as 'myths' strengthens their veracity in the community.
- **Recommendation:** The role of witnessing must not be underestimated and testimonies of first-hand encounters with land use change must be incorporated into the Government's engagement strategies.

**The Sandstone Curtain is a service delivery and communication barrier that shields decision makers from the consequences of their decisions.** Local residents subscribe to the notion of an urban-rural (policy) divide, symbolised by the Great Dividing Range or the 'Sandstone Curtain'. The notion of a curtain attains metaphorical force in that it not only represents

the physical separation between Sydney-based decision makers and rural communities, but also illustrates the perception of governments being able to 'pull the curtain' and remain oblivious to what happens on the other side.

- **Implication:** Local people feel as if they are not adequately represented and their voices are not heard, they feel disadvantaged and disempowered. Alternative citizenship strategies, such as civil protest and campaigns, become means by which local residents assert their voices.
- **Recommendation:** It is recommended that a concerted effort be made to empower local decision makers in their dealings with complex and contested land use issues and to improve coordination and collaboration between the Shire Council and the State Government and across government departments (particularly with those established in the Shire). By enhancing dialogue between local decision makers and state government representatives, strategies to improve service delivery and lower communication barriers can be identified. Thus, a research and development programme that can generate knowledge sharing on local governance for major land use change is recommended. Moreover, it is recommended that such a project is transformed into courses aimed primarily at government agencies to ensure knowledge transfer and understanding of land use challenges across government.

**Perceptions of preferential treatment are profuse.** The State Government and Local Council must navigate governance in a region of increasingly varied and competing sectors. Many express a sense that a bias in favour of the extractive industries is guiding decision making and there is a concern that mining and gas interests are favoured over agricultural interests at all tiers of government. Attribution of preferential treatment for the extractive industries extends beyond governments to individual political actors and parties, and a sense of 'partisanship' exists.

- **Implication:** There is a loss of trust in Local and State Government and elected representatives to equitably represent all stakeholder perspectives and interests.
- **Recommendation:** Perceived bias and partisanship towards particular industries must be reduced. Further insight into the processes leading to perceptions of bias and partisanship is required to be able to identify strategies for how to address this. This study merely touched on these issues; further work is needed across diverse case studies to ascertain patterns of bias attribution and potential strategies to restore a perceptions of balance.

**Effective land use governance requires local empowerment.** The Council is seen as being in a 'bureaucratic void' in which it has limited authority or decision-making powers when it comes to critical land use changes yet is burdened with various negotiation and engagement functions and plays a key role in the governance of extractive industry projects. This 'governance in the gaps' scenario emerges from the failure to create a framework for integrated planning to ensure coordination and collaboration between tiers of government.

- **Implication:** A lack of institutional arrangements for assigning responsibilities and accountability impedes effective local governance of major land use change. This is particularly problematic when local government has little experience in navigating significant land use issues, such as the emergence of extractive activities in an area.
- **Recommendation:** Bureaucratic voids must be filled. Frameworks for land use governance at the local level must be established. Research to garner further insight into the experience of local governments and how vertical integration between State and Local Governments might be improved is recommended.

**New alliances are emerging within the Shire.** Many local farmers and environmental groups meet in the face of what they experience as an antagonistic other (extractive industries) that are seen to threaten their individual and collective well-being. These 'unlikely alliances' represent a relatively new form of rural citizenship by which local farmers find alternative channels to raise their voice in a political space where they feel disenfranchised and disempowered.

- **Implication:** Farmers opposing extractive activities in the Shire are expanding their traditional networks to include environmental and public advocacy groups. As distrust and disenfranchisement builds in relation to conventional sources of representation and engagement (e.g. local government, National Party), some farmers seek alternative outlets for voicing concern and sharing and acquiring knowledge.
- **Recommendation:** Further research is needed to gain a deeper understanding of tipping points for individuals, the role of translocal and transnational networks in framing local

debate and discourse, information sharing and knowledge generation, alliances and value orientation, the extent and nature of land use-based local conflict, and opportunities for compromise and collaboration.

**Ultimately, land use conflict is a logical consequence of having competing interests bound in a geographical space with shared natural resources.**

It is often assumed that attitudes to land use change in such a context are solely shaped by personal interest or political persuasion; however this is a simplistic and misleading assumption. Attitudes to land use and land use change are formed through complex interactions between perceptions of place, relative impact, proximity, reciprocity, and knowledge acquisition and trust, coupled with demographic/socio-economic drivers at the community and individual level. These variables are wrapped in a particular natural, political and cultural setting, making land use conflict extremely difficult to manage. Nevertheless, understanding these variables and their interactions can assist stakeholders in navigating a path to coexistence.

Coexistence does not imply the absence of contest or conflict; coexistence is rooted in the ability to compromise and establish fairness in the relationship with competing land uses and other stakeholders. It is about balancing new developments with notions of place, advancing independent and transparent knowledge and information systems, integrating principles of equity in the cost-benefit exchange, building local capacity and authority, and paying adequate attention to the issues that concern local residents. In Narrabri, many of these foundations for coexistence have been prudently maintained across decades of significant agricultural land use changes. With the expansion of coal mining and the emergence of CSG extraction, these foundations have been shaken. Consequently, it is the responsibility of all stakeholders to re-establish balance, integration and partnerships across the Narrabri Shire and to align land use and industry planning with community expectations, conceptions of place and interests. Establishing open dialogue to determine what these expectations, conceptions and interests are—and how various land uses correspond with them—is the logical first step to coexistence.

## References

Bell S, Park, A. 2006. The problematic metagovernance of networks: water reform in New South Wales. *Journal of Public Policy* 26(1): 63-83

Colvin RM, Witt GB, Lacey J. 2015. Strange bedfellows or an aligning of values? Exploration of stakeholder values in an alliance of concerned citizens against coal seam gas mining. *Land Use Policy* 42: 393-399

de Groot R. 2006. Function-analysis and valuation as a tool to assess land use conflicts in planning for sustainable, multi-functional landscapes. *Landscape and Urban Planning* 75 (3): 175-186

Mann C, Jeanneaux P. 2009. Two approaches for understanding land-use conflict to improve rural planning and management. *Journal of Rural and Community Development* 4(1): 118-141

NSW Government 2012a. *Strategic Regional Land Use Plan. New England North West*. Sydney: NSW Government, Department of Planning and Infrastructure

NSW Government 2012b. *Strategic Regional Land Use Policy*. Sydney: NSW Government, Department of Planning and Infrastructure



Department of  
Primary Industries

