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Centre for Social
Responsibility in Mining

Local government, mining companies and resource development in regional Australia

Meeting the governance challenge

FINAL REPORT

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Centre for Social Responsibility in Mining

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Disclaimer

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Executive Summary

This report summarises the findings from a two-year research project into the governance challenges posed by large scale resource development in mining-intensive regions of Australia.

Unlike the narrower term government, governance applies in situations where authority and responsibility for the tasks of governing – including planning, allocation of resources, administration and service provision – are not vested only in the state but are dispersed among actors from various levels of government, the private sector and the community interacting in joint networks, partnerships or collaborations. This research project captures the perspectives of these different governance stakeholders.

The project methodology involved: (1) a desktop review of legislation, regulation and policy from Australia's four mining intensive states: Queensland, New South Wales, South Australia and Western Australia; (2) telephone interviews with local council chief executives and mine managers; and (3) in-depth case studies of five selected mining regions: the Pilbara in WA, Gawler Craton in SA, Gunnedah Basin in NSW and the Bowen and Galilee Basins in QLD.

Findings

Three thematic areas emerged as key issues in the research: community concerns around the adverse impacts of resource development, specific challenges faced by local governments in addressing those impacts, and the role of state governments.

There were particular **community concerns** in relation to economic, social and environmental impacts. Adverse *economic* impacts most frequently identified were: chronic skills shortages

and the two-speed economy, which resulted in uneven wealth creation. The main *social* impacts were housing availability/ affordability and the challenges in managing and accommodating a rapidly expanding fly-in fly-out (FIFO) workforce. *Environmental* concerns were primarily related to conflicts between resource developers and other rural residents over land use, and over water quality and supply.

The main **challenges faced by local governments** were:

- changing expectations of their role, in particular, the expectation that they would provide a greater range of services to expanding populations
- a narrow revenue base and difficulties in attracting and retaining staff, and
- legislative barriers that prevent them taking a more active role in planning for major resource projects.

There was evidence of some local council authorities taking a more direct leadership role to enable and coordinate the activities of different governance actors to better meet these challenges.

State governments have most authority with respect to mining and many responsibilities with respect to the well-being of mining-affected communities. There was a widespread perception among research participants that state governments are failing to provide adequate resources to assist local governments in meeting the challenges created by rapid expansion in the resources sector. The key challenges faced by state governments in meeting community expectations are:

- responding flexibly and in a timely manner to development applications
- ensuring equitable and prudent investment of royalties so that there is a positive legacy from the current mining boom

- balancing a ‘top down’ regulatory approach with more participatory forms of governance, and
- coordinating and integrating complex regulatory processes more effectively.

Conclusions

There have been three main responses to managing the social impacts of mining:

- A more stringent regulatory approach by state governments, which has led to some improvements but, in general, is seen as reactive and lacking in flexibility.
- The emergence of regional planning initiatives, which are showing early promise. However, many challenges remain, such as managing and responding to incomplete, out of date and contested data and coordinating activities and plans successfully.
- Finally, multi-sector, collaborative bodies are emerging at local and regional levels. These bodies hold promise for creating practical solutions to the governance problems generated by large-scale resource development. However, there must be trust for collaborative groups to work together effectively and this requires the ability to accommodate conflicting values and being prepared to share information, resources, risks and responsibilities.

Recommendations

This report concludes with specific recommendations in relation to planning and regulation, council capacity and collaborative approaches. We recommend that:

Planning and regulation

R1: Local council authorities are engaged much earlier in information sharing and decision-making processes by state governments and mining companies when new projects or major expansions are in the pipeline.

R2: State governments provide additional resources to councils to enable them to prepare their responses to EISs and SIAs in a timely manner.

R3: State governments give consideration to strategic regional assessments, rather than having resource companies develop environmental and social impact statements on a project-by-project basis.

R4: State governments collect baseline data to build a common knowledge base that is accessible to all stakeholders. A comprehensive baseline study, funded by project proponents and executed by local and state government in a given region could become a resource to aid future planning. The formula for contributions would need to be negotiated with all parties.

R5: State governments collect data on non-resident workforces. Other state governments may wish to consider the approach currently adopted by the Office of Economic and Statistical Research (OESR) in Queensland.

Council capacity

R6: Mining companies work with local councils to develop housing and accommodation policies that ensure availability of affordable housing and accommodation for council and other essential services employees.

R7: Companies support apprenticeships attached to local councils.

R8: Companies provide funding to support particular roles within council.

Collaborative approaches

R9: Mining companies, local councils and state government collaborate more at the regional level.

R10: State governments take responsibility for identifying lead agencies

to manage collaboration at the regional level.

R11: Councils in mining-intensive regions may wish to consider the NSW Mining Related Councils model as one means of working together collaboratively to share information and leverage advantages. An alternative model is the Local Leadership Group in each Queensland resource region.

R12: Mining companies reassess their social spend and community engagement priorities and align them with Council community (development) and social infrastructure plans.

R13: Mining companies collaborate with each other and pool their social spend to support larger scale social programs that contribute to a lasting legacy for mining communities. This need not preclude 'branding' opportunities.

Introduction

The purpose of this report is to summarise the findings of the two year research project, *Local government, mining companies, and resources development in regional Australia: meeting the governance challenge*. This research was undertaken by academics from the Centre for Social Responsibility in Mining (CSRSM) and the School of Social Science at The University of Queensland and funded by the Australian Research Council (Linkage Project No. 0989162) and seven Industry partners: the Queensland Resources Council; New South Wales Minerals Council; Rio Tinto; BMA; the Local Government Association of Queensland; the NSW Association of Mining Related Councils; and the Local Government Association of South Australia.

The report begins with a discussion of the background to the project and its research objectives. Next, the project methodology is described and major findings are presented, with a particular focus on the governance of resource development and its effects. The report concludes with some suggestions for building adaptive governance systems.

Background to the project

Recent mining expansion has presented significant challenges and opportunities for regional communities throughout Australia. The purpose of this project has been to examine the capacity of local level governance arrangements to deal effectively with the impacts of rapid, sustained, growth in the resources sector in key mining regions in Australia. Specific objectives of this project were to:

- document the impacts (both positive and negative) of intensive resources development on communities in mining-intensive regions in Australia
- investigate and evaluate how these impacts have been managed at the local level, focusing particularly on the interface between local governments, mining companies, state governments and regional bodies
- identify new governance arrangements – formal and/or informal – and their effectiveness in managing change
- formulate research-based policy recommendations to state and local governments and the mining industry on the more effective management of the regional and local impacts of rapid and sustained growth in the resources sector
- advance the literature on corporate social responsibility, cross-sectoral collaboration and rural/regional governance.

Methodology

This research project incorporates data from Australia's four mining intensive states: Queensland, New South Wales, South Australia and Western Australia. There were three stages to the data collection across the states:

- 1) a desktop review of legislation, regulation and policy
- 2) telephone interviews with local council chief executives and mine managers
- 3) case studies of selected mining-affected local government areas.

Stage one, the desktop review, sourced relevant legislation and government policy documents to identify emerging trends and ascertain how governance responsibilities were allocated, especially at the state government level. Local Government Acts; Development and Planning Acts; Environmental Protection Acts and recent policy statements in each jurisdiction were reviewed.

In *stage two*, structured telephone interviews were conducted with mine managers and council CEOs in mining-impacted regions. These thirty-three interviews explored the resources and

capacities of local governments and the interactions between mining companies, local government and state governments. A breakdown of survey participants is contained in Table 1.

Table 1: Telephone survey participants

State	Mining Companies	LGAs
NSW	8	4
WA	5	4
SA	2	1
QLD	6	3
TOTAL	21	12

In *stage three*, the case studies, field trips to local government areas in five resource regions were undertaken. These were the Pilbara in Western Australia, the Gawler Craton in South Australia, the Gunnedah Basin in New South Wales and the Bowen and Galilee Basins in Queensland. A total of 87 interviews were conducted with representatives from the mining industry, local and state government and the community sector in these regions (Table 2). The case studies also involved participant-observation, with researchers participating in some local and regional meetings relating to mining and its impacts.

Table 2: Case study participants

	Pilbara WA	Bowen Basin QLD	Galilee Basin QLD	Gawler Craton SA	Gunnedah Basin NSW
Community member/organisation	3	5	4	0	4
State government	7	3	3	1	3
Mining industry	4	6	4	5	9
Other private sector	0	4	2	1	0
Local government	5	2	3	1	8
TOTAL	19	20	16	8	24

Research findings

Community concerns about resource development

COMMUNITY CONCERNS

A range of community concerns about the impacts of resource development were identified through the research. These included:

Economic

- Two-speed economy with uneven wealth creation and job creation
- Skills shortages

Social

- Housing availability/ affordability
- Managing a FIFO workforce

Environmental

- Land use conflict
- Water
- Cumulative impacts of multiple mining operations

A range of economic, social, and environmental impacts were identified as resulting from the current resources boom – both positive and negative. The most frequently mentioned benefits were *economic* ones: the wealth generated by the resources sector for Australia's economy and the jobs it created. However, the rapid expansion of the industry in recent years has also led to skills shortages in other industry sectors. The main *social* impacts that were of concern to communities were: pressures on housing availability and affordability, as well as on the quality of social infrastructure, and changes associated with the industry's increasing reliance on a fly-in fly-out (FIFO) workforce. The key *environmental* impacts were also seen as challenges and revolved around land use

conflict between miners, farmers and established residential communities and the cumulative impacts of multiple mining operations.

While these impacts were apparent in each state, there were more commonalities among comparable regions than within states. For example, the remote communities of Karratha in the Pilbara and Roxby Downs in the Gawler Craton faced similar issues, with housing and accommodation problems and the management of the FIFO workforce being the major concerns, due to rapid, large-scale industry expansions in these regions. In contrast, conflicts over land use were the most obvious manifestation of the challenges in managing resource development in emerging mining regions such as the Surat Basin in Queensland and the Gunnedah Basin in NSW.

For the established mining region of the Bowen Basin, the challenges were similar to those of remote communities in terms of the pressures on housing and what was seen to be an excessive movement towards FIFO operations, but framed in terms of the legacy of mining towns and community expectations of mining companies continuing to support a locally-based mine workforce. The cumulative impacts of extensive resource development in the area were also a matter of concern as in other established and mining intensive regions such as the Hunter Valley in NSW.

In short, understanding the regional context requires taking into account such factors as: the remoteness of the mining operation, the level of population density, the commodity being mined, the history of mining in the region, the expected life-of-mine, and the degree of community familiarity with the mining industry. All of these issues have an important influence

on how individual regions respond to the impacts of resource development.

Economic impacts

Two-speed economy

Major resource development has benefitted the national economy by generating revenue and creating jobs. However, while mining companies emphasised this important contribution, many local community members felt that they did not necessarily benefit directly from the greater economic activity. Particular concerns were that FIFO workers used community services but spent their high incomes elsewhere, just as mining companies, in the quest for economies of scale, bypassed local businesses in their supply chains perpetuating what has been called 'the flyover effect' (Storey, 2001).

Skills shortages

Skills shortages were a major concern across the regions. Mining companies are constantly struggling to find the skilled workforce they need to meet increasing production targets and to service new projects coming online. This has led to poaching of workers from other industry sectors, a problem that is particularly acute in small, regional workforces because it leaves state and local government agencies, as well as other private sector employers then facing their own skills shortages.

The mining boom has leached many of the skilled workers and much of the support and people needed for the survival of the infrastructure of the town. Whether it is grader drivers abandoning their machines to drive at the mines or nurses, also needed by the mining companies, or plumbers or carpenters (Local government, QLD).

Social impacts

Housing availability and affordability

Housing availability and affordability are major concerns in the Pilbara and the Bowen Basin. In the case of the Pilbara, the combination of a rapidly increasing demand for housing and a slow supply response (Haslam McKenzie et al, 2009) means that residents of Karratha and Port Hedland pay among the highest real estate prices and rentals in the country. Median housing prices are well above those paid in the Perth metropolitan area or other regional areas of WA (Haslam McKenzie, 2011).

In Queensland's Bowen Basin, housing costs are similarly inflated with Dysart reported in 2011 as having the highest median rent in the state at \$2000 per week. These effects are not confined to the mining towns themselves as distortion of real estate markets is also evident in associated service and residential communities such as Mackay and Gladstone in Queensland. This effect is widespread, with all states reporting that the challenge of affordable accommodation is magnified in mining communities.

In Roxby Downs, housing shortages are not as severe, but the proposed Olympic Dam expansion is expected to double the town's existing population, potentially causing shortages as the town is already at capacity. Similarly the small town of Alpha, in Central Western Queensland with a population of only 400 people has little capacity to prepare accommodation for an expansion of residents and businesses and highlights the complex connection of this to other issues such as supply of land.

"Alpha is going to jump out of its skin when it's allowed to and there is no available land in

Alpha at the moment. It's all State Government leases (Mining company, QLD).

In summary, the limited supply and high cost of housing continues to create major problems in terms of accommodating the labour market in the aggressively expanding regions of the Pilbara, Bowen Basin and the Gawler Craton.

Social and community infrastructure

Housing is not the only social infrastructure experiencing increased demand in resource communities. Social infrastructure includes a wide range of built facilities, services and networks of organisations catering for all community members or segments of the population such as young people or people from non-English speaking backgrounds. Participants highlighted the complex positive and negative effects on both 'hard' and 'soft' social infrastructure that the rapid population growth associated with resources development has caused. For instance, many of these communities are struggling to get the requisite numbers of police, teachers, health workers and youth workers allocated by the state governments even as they welcome population numbers that help make their hospitals and schools viable and avoid the fate of the many regional communities experiencing the withdrawal of services. As well, local governments face rising demand for child care, cultural and recreational facilities as the population expands and national living standards and expectations rise.

FIFO

The perceived impacts of a FIFO workforce were a major issue across the states. There were conflicting views as to the advantages and disadvantages of FIFO/DIDO employment practices. Views commonly expressed by mining company representatives were:

- FIFO as a work practice is here to stay because it is the only way to attract workers to remote locations
- FIFO is the most effective way of managing a construction workforce which is, by its, nature, short term and itinerant
- FIFO offers employees choice about where to live and work, and it is important to offer choice to attract and retain workers at a time of skills shortages.

Views commonly expressed by community members were that FIFO work arrangements:

- place family relationships under stress
- place additional burdens on local infrastructure and services
- fail to provide any economic benefit for local community businesses
- lead to various social ills (crime, violence etc)

It will be the death of us. When people reside here, they add to the community. They buy products from the town and they support other industries. If BHP do 100 per cent fly-in fly-out there will be no more people coming to town, but they'll be taking our resources (Non-mining private sector, QLD).

Local councils held differing views on the impacts of FIFO. Generally speaking,

- Councils in mining-impacted regions accepted the necessity of a FIFO workforce for construction workers, but felt that their towns were negatively impacted by a FIFO workforce.
- There were concerns that non-resident workers were not included in many statistical counts and were assumed to place no extra demands on councils feeding into local government funding formulas. This exacerbated the significant deficit in available council revenue to fund the infrastructure and services required to service resource industry activity.

FIFO work practices

The 2011-2012 Federal *Government Inquiry into the use of 'fly-in, fly-out' (FIFO) workforce practices in regional Australia* provides some of the most up-to-date information available on the impacts and opportunities of using a FIFO workforce. For updates, see: http://www.aph.gov.au/Parliamentary_Business/Committees/House_of_Representatives_Committees?url=ra/fifodido/index.htm

with a wide constituency of concerned people in these locations mobilising politically. This indicates an erosion of companies' social license to operate as well as a loss of confidence in the regulators' safeguards to protect the public interest. Although much of the concern relates to coal-seam gas extraction, there is little distinction made in the eyes of the public and indeed some issues of concern, particularly in terms of social impacts, apply to both industries.

Environmental impacts

Land use conflict

In all four states studied, we found examples of conflicts over land use. There were situations where the resource-rich land in question had environmental values or was close to urban areas. However tension was particularly evident with respect to energy or mineral resource deposits coinciding with agricultural land. This is the case in the Central Highlands and Darling Downs regions of Queensland, the Eyre and York Peninsulas of South Australia, the Margaret River and the Mid-West of Western Australia and the Hunter Valley and Liverpool Plains of NSW.

These issues have prompted legislative responses, particularly in Queensland and NSW. Queensland introduced Strategic Cropping Land legislation, and a ban on mining within a 2km radius of towns with a population of at least 1000 to manage some of these conflicts. In NSW, the O'Farrell government is in the process of developing regional strategic land use plans. Community concerns about the impacts of mining on the agricultural industry have been a major rallying point

Land Use conflict on the Liverpool Plains

The Caroon Coal Action group provides an example of farmers and others in rural communities protesting about what they see as a proliferation of coal and coal seam gas mining activities in sensitive areas across NSW and Queensland.

The group identifies itself as representing a country community that is concerned about the potential dangers that longwall mining poses for the Liverpool Plains. NSW planning processes are widely distrusted within the Group and members believe that the government is more interested in gaining access to greater mining royalties than supporting farming communities. CCAG is calling for "an immediate moratorium on any kind of resource exploration on the Liverpool Plains" until an independent, catchment-wide water study can be undertaken to determine the impacts of coal-seam gas exploration on prime agricultural lands (CCAG, 2009). (Continued p13)

Land Use conflict on the Liverpool Plains (cont'd)

One of the well-publicised actions of the group was their blockade of the property 'Rossmar Park' for 630 days, protesting plans by mining companies BHP Billiton and Shenhua Watermark, to mine coal in the area. This has been followed by other blockades to prevent mining or coal seam gas exploration or activity

The CCAG is one of more than a dozen different groups across north-west NSW that claim there has been a failure of planning processes in NSW. Their specific concerns relate to damage to underground aquifers and to productive food-growing land, subsidence, health risks, property rights, noise and increased risk among other issues. They draw attention to the environmental, tourism and farming values of the land.

Cumulative impacts

Cumulative impacts have been identified as a priority concern in regions having multiple operations and multiple companies especially where this has extended over some time such as the Bowen Basin and the Hunter Valley. Opponents of resource development in these regions are concerned that industry expansion is occurring so rapidly and on such a large scale that there is not enough attention being given to considering the cumulative impacts. While some participants acknowledged that cumulative impacts are hard to measure, quantify and predict, they considered that more effort should be invested in improving measurement techniques before planning approval was given to new projects.

Current legislative and regulatory initiatives by the NSW and Queensland governments to manage impacts of mining were also viewed as reactive, and unable to keep pace with the level of mining activity.

The Infrastructure area is the big one but [the Departments of] Education and Communities and Health they've all got to get their acts together and make sure that those ... and do studies of the impacts on their areas and plan for the future. ...it seems to be they're not doing strategic planning (Local government, QLD).

There is also community frustration around the perceived unwillingness of relevant government departments to regulate or monitor the industry. Many stakeholders interviewed suggested that there needed to be a more planned approach to development approvals, whereby all applications are viewed *in toto* not simply assessed on a 'case by case' basis. They also suggested that there needs to be greater consistency in regulations across all industries that contribute to cumulative impacts.

We've got to stop this fragmentation ... so we have to do it so that when they [the companies] meet they talk about the cumulative effects of the projects for the social impact. Not their particular impact but the cumulative impact. ... You can see how that would make a lot more sense. It is the cumulative effects that are our biggest problem and no-one's looking at it. They mention it but they definitely do not do it. ... In fact if anything they shouldn't be looking at one project, they should be looking at the cumulative effect because if they did that they wouldn't need to worry about each individual project. So it's looking at the cumulative effect that is absolutely critical (Local Government, QLD).

Challenges for local government

CHALLENGES FOR LOCAL GOVERNMENT

The main challenges faced by local governments were:

- Changing expectations of their role and ‘scope creep’
- A narrow revenue base and shortage of human resources
- Legislative barriers that prevent them taking a more active role in planning for major resource projects

In spite of these challenges, there was evidence of some local councils taking a more direct leadership role to coordinate the activities of different governance actors.

Role of local government

Local government is the level of government closest to our daily lives and its key role has traditionally been to ‘make our lives manageable’ (Douglas, 2005: 232). Traditionally regarded as accessible and relatively uncomplicated, local government nevertheless performs two distinct functions – a *service/ management role*, where council staff are responsible for the delivery of local services and the collection of taxes (traditionally understood in terms of ‘roads, rates and rubbish’) and a *political/ representative role*, where democratically elected officials represent the interests of their constituents at the local level (Douglas, 2005). This section of the report looks at the effectiveness of local government in carrying out these functions when confronted by large scale mining developments.

Service/ management function

In general, local councils were seen by research participants as performing adequately the traditional business of local government.

They’re effective at all the classic ones – roads, waste management, planning, community planning they seem to do quite well (Mining Company, WA)

This was particularly the view of companies in regions with FIFO workforces, or those that were very remote since mining companies in those situations were generally self-sufficient and had very low expectations of, and demands of local government. Conversely, in more established mining regions expectations on local government were higher, with some mines suggesting that local government should provide more infrastructure to service the expanding mining workforce, especially housing.

However, the findings indicate that councils face a number of problems in meeting these expectations. First, Australian local government already has a backlog of infrastructure renewal works, particularly in the areas of community infrastructure such as swimming pools, community centres and libraries (Dollery and Mounter 2010: 218). In some cases it appears that mining company contributions to the local region (through swimming pools, libraries and even jetties) simply increase that backlog when they include infrastructure works that require ongoing maintenance, even after mining activity has ceased. One of the local councils in NSW, for example, estimated an annual cost of \$300-500k per year to maintain a now-defunct coal-loading jetty that was considered by the local community to have heritage value. In other areas, councils and mining companies were moving away from one-off capital grants projects towards initiatives that

were driven by the council, not the mining companies, which were financially more sustainable in the long-term.

We've got to be very careful because we don't want swimming pools that no-one's going to use and we've got to maintain for the next fifty years. We're not interested in that (Local government, QLD).

Second, while there is an expectation that local governments will provide a range of community services and facilities, their powers and resources are severely circumscribed, making it difficult for them to fund an acceptable level of service provision to meet the needs of their constituent communities. The use of State Agreements (in SA, WA and, to a lesser extent, QLD) and rate pegging (NSW), for example, limits the capacity of local governments to fund service provision.

In short, local councils are resource constrained, making it very difficult for them to respond to community and industry demands for better infrastructure and services in the context of rapidly expanding service delivery requirements. Moreover, in all states except for WA, with its Royalties for Regions scheme, state governments have shown reluctance to provide additional resources to local councils. As a consequence, councils are turning increasingly to the mining companies themselves to fund additional infrastructure, with varying degrees of success.

For their part, mining companies are unwilling to fill the gaps in community services and are somewhat cynical about being treated as a so-called 'cash cow' by local councils. Among councils, this was interpreted as mining companies having no interest in providing core services (such as health), only in sponsoring community events and groups, which one

council representative termed the 'netball bib' approach.

While mining companies acknowledged the resourcing and capacity problems faced by local councils, they felt that it was properly the role of the state government to address shortfalls, although the reality is often closer to a negotiated outcome in which companies temporarily supplement or support government services to bridge the gap between rapidly expanding community need and government response. Contestation over who should be responsible for infrastructure and services provision was particularly prevalent in remote parts of Queensland and Western Australia where government-provided services are lacking, and in regions with company towns where mining companies once accepted responsibility for service and infrastructure provision.

Political/ Representative function

Local council was seen as performing well in its representative function in most jurisdictions and its strong connection to the community was often viewed as its core strength:

Local Council has a very important role as the focus for the community - in many ways it is the funnel through which many questions are directed and resolved. And they're a very good council with strong council leadership and competent administration and they're responsive and know what's going on locally. So they can deal with that whereas state or federal government are more remote and can't deal with day to day issues (Mining company, WA).

This connection with the local community was often viewed advantageously by mining companies who used council as the 'eyes and ears in the town', providing information and advice on community sentiment and concerns. Local government was also seen as the appropriate vehicle for lobbying state and

Federal governments on behalf of the region, although it was felt that in order for this to occur, it needed to work more collaboratively with other stakeholders through entities such as regional mayors' groups and regional organisations of councils.

I think they have to learn...to work with other councils to even get bigger advocacy bases for those critical growth issues that they're going to have to lobby state and Federal government and industry [to provide] (Mining company, QLD).

Among some mining companies, however, there was a feeling that councils should do more in representing business interests, rather than simply those of the community, and that local government could be more active in advocating on behalf of the regions' economic interests (i.e. by promoting the benefits of mining). While the companies interviewed felt that councils were rarely willing to play this role because it was considered 'politically unsafe' to do so, we found little evidence of any active campaigning by councils against the mining industry.

At the same time, we also found evidence of disillusionment among local community members about councils' perceived failure to represent community interests vis-a-vis mining. This was particularly the case in the Bowen Basin, where there was a sense of disillusionment with council in not opposing vigorously enough the proposal by mining company BMA to adopt a 100 percent FIFO workforce for its Caval Ridge mine.

We're about to have our fourth meeting so it was about 3 or 4 months ago. It's all very recent... So that was the first meeting which I attended on behalf of [name of organisation] because they actually asked me to be there. And there were a couple of people saying 'What are the council doing about this' and

they were really starting to bash the council (Community organisation, QLD).

In regions where land use conflict was high, particularly rural New South Wales (Gunnedah Basin, Liverpool Plains), there was also evidence of conflict within councils between pro and anti-mining attitudes, making it difficult for councils to carry out their service delivery or representative functions effectively.

This indicates a tension for councils in performing their representative functions in terms of whose interests they are seen to represent. In many cases, councils managed to maintain this balance well and there were few signs of any problematic relationships between councils and mines apart from one example in NSW. On the whole, the relationship between the two was often described as 'harmonious', 'close' 'civil' or 'robust'. Nevertheless, there was a general trend of better relations between mining companies and the administrative arm of local government than between mining companies and the elected officials, indicating a tension between local government's representative role and its management function.

Coordinating function

Both mining companies and local councils spoke of the potential for local government to adopt a strategic community leadership and coordination role (Cole, 2003), particularly in the area of mining governance. Councils already playing this role were viewed by mining companies as being 'proactive'.

This coordination role applied to two key dimensions of local governance. First, in coordinating state government departments at the local level: something that, in the opinion of both mine and council interviewees was severely lacking. In Queensland:

We would have liked to have thought it was state government managing the impacts of mining but basically it was left to local government. When we had that mining boom about 3 or 4 years ago we actually coordinated meetings with the government departments – education you name it – to say ‘what are you doing about it? You’ve got land here, they’re expanding, what are you doing?’ Basically they were behind the eight ball (Local government, QLD).

The second aspect of coordination lies in a bringing together the range of different stakeholders, including other councils, both for the purpose of coordinating activities but also to have a stronger voice in lobbying Federal and state government. In the Bowen Basin, this has led to the establishment of a range of mining-related groups developed under the auspices of local governments including the Isaac Regional Council, and Central Highlands Regional Council.

The ability of councils to adopt a proactive stance in coordinating the activities of a disparate range of mining stakeholders is partly influenced by existing capacities and resources. It is generally accepted, for example, that smaller councils often lack this capacity. However, local councils also explained how constrained they were in this role, particularly at the stage of project proposals, because of the absence of any formal/regulatory frameworks that legitimised their role in this process or provided them with the resources they needed. Indeed, they spoke of the difficulty of planning for themselves, let alone facilitating the involvement of others when it came to new mining developments. Beginning with the project proposal stage, they noted that:

- It is difficult to plan when councils are treated as ‘just another concerned citizen’ in relation to Environmental Impact Statements (EIS)

- There is an enormous burden placed on councils when responding to one or more EIS, especially for small councils
- It is important to consider the cumulative impacts of mining, not just of individual project proposals. Current processes do not cater for this even in Queensland where the new Social Impact Management plans (SIMPs) are meant to consider the whole system.

Local government: A new ‘enabling authority’?

The central Queensland town of Moranbah is the administrative hub of Isaac Regional Council (IRC) and is surrounded by coal mines. Confronted by increasing community disquiet about the nuisance, amenity and potential health impacts of dust given current and projected levels of industry activity, the IRC convened a workshop in 2009 to discuss how these impacts could be managed.

The meeting was attended by stakeholders from mining companies, the community, and State and local government. The outcome was the formation of the Moranbah Cumulative Impacts Group – a multi-sector collaboration which chose to operate as a sub-committee of council – to improve the monitoring and reporting of cumulative impacts on the town. This is an example of a local government playing a coordinating role and facilitating collective action beyond the authority of any individual stakeholder groups.

Role of the state government

THE ROLE OF STATE GOVERNMENT

State governments have most authority with respect to mining and many responsibilities with respect to the well-being of mining-affected communities. These include provision of health, education, police, housing and community services and of associated infrastructure as well as public works and main roads.

Key challenges for state government:

- Responding flexibly and in a timely fashion to the pace of change
- Equitable and prudent investment of royalties for long term legacy
- Balancing regulation and direct action with indirect 'steering'
- Coordination of multiple actors and integration of many considerations

State government approaches to managing mining development

In Australia, local government authority is derived from powers delegated to it by state governments. Therefore, to understand how the impacts of mining are managed at the local level, it is important to understand the relationship between state and local governments and how mining companies interact with them.

A recurring theme throughout this project has been criticism of state government capacity. There is a widespread perception that state governments are failing to provide adequate resources to assist local governments in meeting the challenges created by rapid expansion in the resources sector. Other performance

issues were also raised. For instance the Queensland government was variously described as slow, reactive, inefficient and uncoordinated: "various arms of government are just not talking to each other" (Mining company QLD).

Our purpose in this section of the report is to identify what steps state governments are taking to ensure mining-impacted regions are provided with adequate services and facilities and the implications of different approaches for local government authorities and mining companies.

State governments, like all other governments, face competing priorities when allocating funding. Moreover, there is always a conflict between delivering resources equitably and delivering them efficiently. Therefore state governments adopt a range of direct and indirect actions to balance these priorities.

Direct action refers to the extent to which a government is prepared to commit direct government expenditure and human resources to the provision of public goods and services. *Indirect action* refers to the strategies it adopts to encourage other governance actors to pay for or provide these services. Direct action occurs on a continuum from maximal intervention, whereby the state assumes extensive responsibility for the provision of public goods and services (the welfare state), to minimal intervention where market forces determine the level of service delivery. The 1960s company towns, where the mining industry assumed responsibility for constructing, funding and administering the physical and social infrastructure of the town, is an example of the minimal state.

Indirect action includes a variety of intervention strategies designed to stimulate private sector participation in the

provision of goods and services. Governments act indirectly either by regulation or through the encouragement of collaborative initiatives such as public-private partnerships to fund the provision of social and physical infrastructure.

We investigated the extent to which the prevailing *politics*, quality of *public institutions*, government *policies*, and financial allocations (*purse strings*) influenced the delivery of public services in each state. The following discussion details the approaches adopted by different states. A state-by-state comparison summarising the key actions in each jurisdiction is provided in Table 3.

South Australia

Roxby Downs, established in the 1980s, is the last purpose-built mining town in Australia (Thomas et al. 2006) and its governance arrangements reflect the old company town model. Located in the Gawler Craton in South Australia and created specifically to service the Olympic Dam mine, Roxby Downs represents a unique governance situation. It is situated in the Far North of the state, an unincorporated area without traditional local government administration. This function is carried out by the Outback Communities Authority, which covers nearly 625,000km² or 65 percent of the state of South Australia and must provide local government services to 31 communities across the outback, where just 3,900 people live.

Under the terms of a State Agreement, the *Roxby Downs (Indenture Ratification) Act 1982*, the township of Roxby Downs is governed by the Municipal Council of Roxby Downs (the Roxby Council). The council area, which includes the town of Roxby Downs and the Olympic Dam mine, covers an area of 110 km², and has an estimated population of 4,478 (ABS,

2010). The Roxby Council operates with the powers, functions and duties of a local government authority in SA, but with some notable exceptions. First, the Council runs a deficit budget, which is funded equally by the state government and BHP Billiton. This funding arrangement has ensured that Roxby Downs has infrastructure and service provision that is the envy of most other LGAs. Second, all decision-making power is vested in an Administrator, rather than in a democratically elected council, and the Administrator is a state government appointee, answerable to the Minister for Mineral Resources and Energy.

In an attempt to address the lack of democratic process implicit in the centralisation of authority in the role of the Administrator, various efforts have been made to make the Roxby Council a more inclusive and consultative body, but these have met with limited success. A Community Board was established in 2003, initially to develop a ten year Community Plan, and later to play a more active management role. However, the Board operates via a series of volunteer committees and there have been difficulties in attracting and retaining members:

As you can imagine in a mining community, we have a very high turnover population. People stay two, three years and then they'll move on and while they're there they contribute significantly to committees, but they leave a hole when they go...(Council employee).

This lack of volunteers means that community input into Council decision-making processes is minimal and the degree of power invested in the Administrator's role remains a source of concern for some community members. The Roxby Council operates in an institutionally thin context, with all major

Table 3: A comparison of state government approaches to enable the delivery of public services and infrastructure in mining-impacted regions

	Politics	Policies	Public Institutions	Purse strings
South Australia	<ul style="list-style-type: none"> Bipartisan support for Olympic Dam expansion BHPB leveraging power to expedite approvals process 	<ul style="list-style-type: none"> Olympic Dam Expansion Act Environmental management plans specific to Olympic Dam No other policies 	<ul style="list-style-type: none"> Northern Arid Lands NRM Board Outback Communities Authority Roxby Council Roxby Downs Community Board 	<ul style="list-style-type: none"> Roxby Council funded via 50/50 split between state and BHPB Budgetary constraints
Western Australia	<ul style="list-style-type: none"> Liberal/ National alliance Commitment to regional development Uneasy relationship with resource companies over FIFO 	<ul style="list-style-type: none"> Royalties for Regions Pilbara Cities Browse Basin Strategic Review 	<ul style="list-style-type: none"> Pilbara Development Commission PICC Pilbara Regional Council RDA Pilbara 	<ul style="list-style-type: none"> Royalties for Regions Pilbara Cities Public/ private partnerships
Queensland	<ul style="list-style-type: none"> Land use conflicts Assertive local governments (Bowen Basin Mayors + LGAQ) Community action groups (e.g. anti-FIFO) 	<ul style="list-style-type: none"> Local Government Act (2009) Sustainable Planning Act (2009) Sustainable Resource Communities Policy (and SIMPs) Strategic Cropping Land Act 2011 Land Access Policy Amendments 2010 Major resource projects housing policy Surat Basin Future Directions Strategy Regionalisation strategy 	<p>Multiple hybrid bodies at various levels – local, regional and state, including:</p> <ul style="list-style-type: none"> Sustainable Resource Communities Partnership Local Leaderships Groups RDAs Catchment authorities 	<ul style="list-style-type: none"> Sustainable Resource Communities Policy Fund Re-distribution of royalties away from resource regions Approval conditions specify company's community spending
New South Wales	<ul style="list-style-type: none"> Change of government Land use conflict Cumulative impacts 	<ul style="list-style-type: none"> Repeal of Part 3A <i>Environmental Planning & Assessment Act 1979</i> Coal Seam Gas Moratorium Bill 2011 Strategic Regional Land Use Plans Aquifer Interference Policy Water Sharing Plans and Water Policy 	<ul style="list-style-type: none"> Upper Hunter Air Quality Network Naomi Catchment Management Authority Liverpool Plains Land Management Committee Northern Inland Regional Development Board 	<ul style="list-style-type: none"> Mobilising industry funds (e.g. formula for Hunter Air Quality Monitoring network) Some market instruments (e.g.) Salinity trading scheme Capping of council rates

decisions being made by the SA government and BHP Billiton. Therefore the impacts of mining are managed via direct action by the state, with vigorous contestation between the government and BHP Billiton over who will assume financial responsibility for the provision of a range of public goods and services.

In spite of increased resource development activity in other areas of the state, SA politics over the last twelve months have been dominated by planning for the expansion of Olympic Dam, which required the signing of a new Indenture Agreement. After intense and protracted negotiations, with both sides seeking particular concessions, the new Agreement was signed in late 2011. The complete focus of government attention on expediting the Olympic Dam expansion and increasing South Australia's revenue stream has left little opportunity for addressing other aspects of resource development. There have been no new policy initiatives to guide the management of social impacts and there has been no additional state funding allocated to address them. The state government is pursuing a cautious budgetary approach, with government departments being given a directive to reduce proposed expenditure in all areas (Roxby Council, 2010).

The negotiations over the Olympic Dam expansion demonstrate the persistence of the minimal state paradigm, with the government's key focus being on how it can extract maximum royalties and employment opportunities for SA, with minimal commitment of government expenditure on social services and infrastructure.

What is the future for Andamooka?

The proposed Olympic Dam expansion will have major social impacts on the nearby town of Andamooka. With a total population of just 800, Andamooka is one of the many outback communities that lack local government representation. It is governed by the Outback Communities Authority (OCA), with input from the Andamooka Progress and Opal Miners Association (APOMA), which is a voluntary organisation providing advice to the OCA, and management of a range of local issues.

Neither the OCA nor APOMA are equipped to manage the impacts of the proposed expansion of Olympic Dam, which includes a proposal to build a construction camp designed to house up to 10,000 construction workers. This camp, located half way between Andamooka and Roxby Downs, would effectively double the entire population of the Far North of South Australia. This raises enormous governance issues for the region.

Since the camp falls outside the jurisdiction of the Roxby Council, BHP Billiton has made it clear that it sees provision of the necessary infrastructure as a state responsibility and has indicated that Andamooka should be gazetted as a normal local government area as quickly as possible. The state government, for its part, has indicated it thinks that BHP Billiton should be responsible for some of this infrastructure provision. The most recent suggestion from the state is that an Administrator, along the lines of the Roxby model should be appointed to manage the town's governance. (House of Representatives, 2011)

Western Australia

Western Australia best exemplifies the evolution of company-state relationships from the old company town model to more indirect forms of governance. This shift has been precipitated by the formation of a political alliance between the state Liberal and National Parties that enabled the two parties to form a coalition government. In 2008, the Nationals campaigned on a 'Royalties for Regions' platform and it is a commitment to implementing this policy that underpins the National-Liberal alliance. Through this agreement, the equivalent of 25% of WA's mining and petroleum royalty revenue (up to a maximum of \$1 billion per annum) is being reinvested in regional Western Australia's infrastructure, services and community projects.

This direct policy response has had a major impact on the state's mining intensive regions, most notably the Pilbara, which stands to gain approximately \$1 billion over five years from Royalties for Regions and the related Pilbara Cities initiative. Moreover, the state has adopted a range of more indirect and enabling initiatives to expedite infrastructure planning and development in the Pilbara.

First, the WA government has reviewed its own bureaucracy and made concerted efforts to expedite planning and approvals processes. Second, it has stimulated local government action, not just via additional funding through the Royalties for Regions program but also through the local government reform process. Third, it has engaged with the private sector to leverage additional funding.

There are indications that this mix of strategies is bearing fruit. For example, there are currently nine major infrastructure projects under development

in the Pilbara with an approximate value of \$4.2bn, all of which are being funded via partnerships between key stakeholders – different state government departments, individual mining companies, property developers and local councils (Shire of Roebourne 2011). A number of interview participants also confirmed that attempts to expedite planning and approvals processes were meeting with some success. Landcorp, in particular, was nominated as having improved its processes significantly.

While there is evidence that the variety of policy initiatives, partnership arrangements and administrative reforms adopted by the State have succeeded in channeling much-needed resources into the Pilbara region, some questions remain as to the longer-term effectiveness of the state's approach. Research participants expressed diverse opinions as to the value of the Royalties for Regions program, for example. Local government authorities are, by and large, supportive of the program, particularly the Shire of Roebourne and the Town of Port Hedland, which are benefiting significantly from the funding boost. This is also a model that is very attractive to other Australian councils in mining-impacted regions, with the NSW Association of Mining Related Councils and Local Government Association of Queensland, for example, advocating for a similar scheme in those states.

Other research participants, however, were much more critical of the program, seeing it as inequitable and potentially divisive,

I call it Ransom for Regions. It's pork barrelling of the worst kind... most of the expenditure has gone to the south west [region of WA] (Mining company executive, WA).

[It's the] worst policy in years. It means you have a certain proportion [of government

expenditure] fenced that you must spend in specific regions (State government official, WA).

There are also concerns that, while the public-private partnership approach is clearly delivering some new projects, the money provided so far falls well short of the \$3.8 billion required to meet the infrastructure needs of the region identified in the list of Pilbara Plan priority projects (RDA, 2010).

Finally, there are early indications that, even when funding is available, other capacity restraints prevent the delivery of additional infrastructure and services. The Nationals are currently in talks with the Federal Treasurer about handing over a portion of the multi-billion-dollar Royalties for Regions scheme for a future fund. There is some anecdotal evidence to suggest that the Premier is investigating this approach because the state cannot find suitable projects in which to invest quickly enough to meet the expenditure commitments of the Royalties for Regions funding arrangements.

In summary, of all the states, Western Australia has been the most active in terms of financial commitments, its strengthening of capacity within the public service and local government, and in its ability to leverage additional funding from the private sector to provide infrastructure and services to support mining-impacted communities. However, many challenges remain in managing the impacts of the resources boom.

Queensland

Mining regions in Queensland are very different from those in WA and SA. Although the history of the Bowen Basin parallels that of WA, insofar as many company towns were established there in the 1960s, Queensland is more decentralised than the other States

(OESR 2011). As a consequence, the significant expansion of the mining industry over recent decades has largely occurred in the vicinity of existing rural towns, leading to growing conflict over land use.

Three issues are currently dominating the political discourse: competing claims for land and water by the resource sector on the one hand and agriculture and urban settlements on the other; social impacts of changing conditions for the mining workforce, with longer shifts and increased use of FIFO workers; and a conviction in many quarters that the distribution of the costs and benefits of mining is inequitable.

Each of these issues has produced heightened levels of community activism and increasingly, different interest groups are working together to pressure the government. This pressure is being exerted not just by formal opposition parties but also by local governments working together, industry advocacy bodies and organised community coalitions.

The campaigning strategies adopted have prompted the state to be quite responsive to political pressure, often changing institutional arrangements or setting up new groups to address politically-charged issues, for example, the formalisation of the Bowen Basin Mayors' Group as the Bowen Basin Local Leadership Group. In many cases, the state has responded to political pressure with policy initiatives. These include the 2011 Draft Regionalisation Strategy, the Strategic Cropping Land Policy, a Major Resource Projects Housing Policy, the Sustainable Resource Communities policy, the Surat Basin Workforce Development Plan, a policy to restrict mineral exploration within a two km radius of town boundaries, and the introduction of a requirement for

SIMPs for each major development proposal.

The Queensland government has also embarked on a series of administrative reforms that adopt two different strategies to reduce costs and improve efficiency, coordination and service quality: restructuring the public service, and reorganising regional administration along more collaborative lines. The attention to regional collaboration involves not just state government actors but also joint efforts with other stakeholders from local government, and the private and community sectors with some previous functions of state government being shifted to private organisations, communities, not-for-profit groups, and partnerships or networks composed of a range of actors from the market, state and civil society. Such initiatives received some endorsement:

They're on the right track [with] the Surat Basin Future Directions – I've never ever seen so many different departments working together over such a short space of time (Local Government, QLD).

Nevertheless, there is accompanying concern about a proliferation of less formal and enduring 'hybrid' institutional arrangements that are neither public or private – such as quasi-autonomous non-government organisations and public-private partnerships in specific regions or localities.

Moreover, while the state government has pursued administrative efficiency and encouraged collaboration between governance actors, it has been less forthcoming with funding to support regional development. While mining royalties contribute around \$4 billion a year to state coffers, there is a strong perception that the state government disproportionately distributes these

resources away from the regions. There are also indications that the state is actually cutting spending on essential services:

[S]ince amalgamation... there's been a significant reduction in state subsidies to council to be able to cope. Road subsidies are probably a prime example. ...They used to get a 40 percent subsidy. Now they don't (Non-mining private sector, QLD).

There is also evidence to support the widespread perception that the state government is trying to leverage funding from the private sector for social infrastructure and services. For example, the state is using the powers of the Coordinator-General to specify private spending attached to licenses of new mining operations. Approval for one recent project was conditional on the proponent participating in a collaborative group to manage cumulative impacts, and contributing information and \$150,000 funding to a study of cumulative social impacts of mining in the region (Coordinator-General 2010).

The Queensland government has demonstrated a preference for addressing the impacts of mining primarily via a regulatory approach and using its powers to coerce the private sector into contributing more financially to address the social impact of resource development. Its efforts to stimulate more collaboration have met with some success, notably in the formalisation of Local Leadership Groups in each major resource region. However there is still considerable fragmentation and remaining problems of multiple plans, lack of coordination, and blurred authority.

New South Wales

The New South Wales situation is akin to that of Queensland, with mining expansion occurring in more densely populated

regions of the state. As a consequence, regions such as the Hunter Valley and Liverpool Plains are experiencing similar conflicts over land use to regions such as the Bowen and Surat Basins. The political response to this, however, has become less predictable, due to the change of government in March 2011.

The current state government demonstrated a similar preference to Queensland government, in adopting a regulatory approach to manage the impacts of mining. Initiatives include the Repeal of Part 3A of the *Environmental Planning & Assessment Act 1979*, the Coal Seam Gas Moratorium Bill 2011 and the introduction of Strategic Regional Land Use Plans, an Aquifer Interference Policy and Water Sharing Plans and a Water Policy. Our interviews and the NSW case study were conducted prior to the change of government and the lack of trust in state government agencies was a consistent theme throughout the interviews.

At the same time, state government participants indicated that they had little faith in the capacity of local governments to manage the impacts of mining. In recent times, responsibility for mining development has been taken away from councils and now lies primarily in the hands of state government departments.

Like their Queensland and South Australian counterparts, successive state governments in New South Wales have been unwilling to commit additional funding to address the impacts of mining. This resourcing shortfall, combined with lack of trust in the state government more generally, and perceptions of a lack of local government capacity has led to heightened levels of community activism, particularly in the Hunter and Liverpool Plains regions. This has, in turn, led to the mobilisation of some powerful lobby

groups, notably, the Caroon Coal Action Group.

One initiative intended to address some of these tensions is the commissioning of the Namoi Catchment Water Study. This study was initiated by Liverpool Plains Land Management Inc, with UQ's Centre for Water in the Minerals Industry and UNE providing the scientific credibility and an evidence-based approach, at the same time as the Caroon Coal Action Group provides the community mandate and pressure on the government from community action. This 18-month study was initiated by the state government and funded by the Commonwealth Government and industry.

A Stakeholder Advisory Group (SAG) oversees the study. The SAG consists of representatives of landholders, the Namoi Catchment Management Authority, the petroleum and gas industry, the mining industry, local government, irrigators, Regional Development Australia and the NSW Department of Mining. The intended purpose of the collaborative study is to determine where mining should best be carried out. It illustrates the NSW government's interest in appeasing disaffected rural populations, seeking collaborative solutions, gathering both scientific and lay data and mobilising resources from elsewhere to manage the impacts of resource development.

Conclusions

Building adaptive governance solutions

This study into the governance challenges posed by large scale resource development was initiated as a response to concerns that existing governance arrangements were inadequate to manage effectively the demands of a rapidly expanding resources sector. Research findings confirm that current local level governance arrangements are indeed struggling to keep pace with the demands placed upon them in mining-intensive regions. New approaches to regulation and policy making and different collaborative arrangements are required, to minimise the negative socioeconomic impacts of resource development on local communities. This final section of the report summarises the key governance challenges identified through the research project, identifies the limitations of conventional response strategies and provides examples of emergent strategies that may lead to more effective governance models in the future.

The governance challenge

Two factors in particular are placing pressure on traditional models of governance. These are:

- the exponential growth over the last decade, particularly in the iron ore, coal, petroleum and gas sectors, and
- the emergence of cumulative impacts as a major governance challenge.

The negative social impacts of rapid growth – lack of affordable housing, the growing reliance on a FIFO workforce to address skills shortages and the concomitant ‘fly-over effects’ experienced by certain local communities, are at least well recognised, even if conventional governance responses to them are proving to be inadequate. The cumulative

impacts of multiple mines and operators, on the other hand, are imperfectly understood, partly because they are experienced by different communities in different ways. In the case of the Hunter Valley and the Bowen Basin, for example, concerns over cumulative impacts on air and water quality have evolved over a considerable period of time. In other cases, such the Gunnedah and Galilee Basins, these concerns have emerged largely in response to the rapid expansion of the coal seam gas industry in regions that have had limited prior exposure to the resources sector.

As the different case study examples in this report illustrate, high levels of development activity, coupled with expansion into new areas and new commodities, have exposed companies and communities to new risks and new conflicts, most notably around land and water use. These are complex and multi-dimensional issues, ‘wicked problems’ that impact on many stakeholders, often with conflicting priorities and values. Developing appropriate governance responses to these problems requires stakeholders to find new ways of thinking and working together.

Conventional response strategies

A powerful reason to advocate for different governance processes is that, in the opinion of research participants, conventional regulatory approaches are failing to address adequately community concerns. Through the course of this project, local and state government officials, community stakeholders and mining company representatives alike expressed frustration with the current regulatory environment, leading to the conclusion that current approaches to managing social impacts are structurally flawed.

New resource projects and major expansions are evaluated on a project-by-project, or site-by-site basis, rather than on a regional basis. This limited focus is clearly inadequate to address the significant cumulative and regional impacts of multiple overlapping operations, proposals and development applications. This narrow focus has been adopted by mining companies and state governments alike. Regardless of whether a company's community investment programs (which are designed to mitigate social impacts) or State government approvals processes such as the current EIS regime are evaluated, the problem is the same – a narrow focus on single site or single company impacts within a limited geographical area. As the Bowen Basin, Gunnedah and Hunter Valley case studies illustrate, individual companies do not operate in isolation – their impacts are multiple, cumulative and extend beyond the limits of any single mining lease. This applies equally to positive and negative impacts.

Conventional responses also fail to take into account the reactions and interactions of the plethora of government, community and private sector stakeholders, all of whom are impacted by resource development. These stakeholders include: local community members who experience the impacts of resource development directly, mining companies, state government agencies, local government authorities, infrastructure providers (often partially or wholly corporatised as in the case of QR National, and water and power providers), and market actors such as housing and finance providers, developers and builders. Current governance models fail to take into account the different values systems of these distinct stakeholder groups, or even to acknowledge their role in the governance process. Without acknowledging and

incorporating different points of view, it is impossible to set clear goals, gain consensus or find trade-offs between different priorities

Conventional linear response strategies also fail to acknowledge the interconnection between social, economic and environmental impacts, and local and regional contexts. It is important for governance actors to develop a better understanding of social systems, so that systems thinking can be applied to the management of the impacts of resource development.

This will be a challenging process. Not only are traditional approaches being questioned and found wanting, the findings from this study confirm that there is a lack of information on which to base decision making around new processes. Many research participants pointed to the poorly-defined nature of many putative impacts and the incomplete and contested data that are often used to substantiate claims of negative social impacts. There are many different kinds of knowledge and sources of information and, to date, there are no processes in place that enable comparison between, or validation of, these different data sources. Better ways of sharing, extracting and synthesising disparate sources of information are needed to gain an accurate picture of the social impacts of resource development.

Finally, conventional governance processes are inadequate because they fail to take into account the dynamic and unpredictable environment in which mining companies operate. The cyclical nature of resource sector activity, its 'boom and bust' propensities, are well-documented. Yet current approvals processes enforced by state governments, which are focused on up-front conditions and commitments, fail to take into account the fact that

industry needs and social impacts will vary over the life of a project. There need to be mechanisms whereby the terms and conditions of project approvals can be revisited, when external circumstances change.

Emerging response strategies

The regulatory environment

The major response strategy to the governance challenges posed by resource development that has been identified through this project has been the propensity of state governments to resort to a more stringent regulatory environment. Over the past five years there have been significant changes introduced, mainly in the area of planning and development legislation. This is particularly the case in NSW and Queensland, where many new regulations and policies have been introduced (table 3).

Despite some achievements, these responses have been largely reactive and were generally criticised by research participants as increasing the bureaucratic burden, without delivering better outcomes for companies or communities. Analysis of these regulations suggests that they are unlikely to improve the quality of governance in mining-impacted regions because they still focus on individual operations and limited geographical areas. There are still limited attempts to address cumulative impacts, no allowance is made for changing circumstances through the life of a project and there are few opportunities for key stakeholders to collaborate in the governance process.

Social Impact Management Plans

Late in 2009, the Queensland Government amended the terms of reference for major resource development projects needing an Environmental Impact Statement to include an additional requirement for project approval. Proponents must now prepare a Social Impact Management Plan (SIMP) for each new or expanding resource extraction project. The purpose of a SIMP is to establish '[t]he roles and responsibilities of proponents, governments, stakeholders and communities throughout the life of a project in mitigating and managing social impacts and opportunities during the construction, operation and decommissioning of major resource development projects' (Department of Infrastructure and Planning 2010: 5).

Guidelines indicate a number of categories of impacts to be addressed in a SIMP including housing and accommodation; community health, safety, wellbeing and amenity; and social infrastructure – both the voluntary sector and public services such as health, education, justice, childcare and transport.

It is currently envisaged that each mine will have its own SIMP. While site-specific, and developed by the proponent, there are specifications that a SIMP is to be developed in collaboration with other stakeholders. For more information and SIMP guidelines, see: <http://www.deedi.qld.gov.au/cg/resources/guideline/simp-guideline.pdf>

Regional planning

A second general trend relates to evidence of greater government interest in planning at a regional level. Examples of regional planning initiatives include: the Browse Basin Strategic Review in Western Australia, the Galilee Basin Economic and Social Impacts Study and the Surat Basin Future Directions Statement in Queensland, and the Hunter Valley Cumulative Impacts Study in NSW.

There have also been moves to coordinate regional planning initiatives between different organisations, either via regulation, improved planning, or through other measures. Examples in Western Australia include the Ravensthorpe-Hopetoun Coordination Group, which coordinates planning efforts across state and private sectors in the region, and the Pilbara Industry Community Council (PICC), an industry-led initiative that coordinates activities across a number of projects that reflect the shared priorities of member organisations, e.g. their Indigenous employment initiatives. In Queensland, the Gladstone Region Social Infrastructure Strategic Plan (SISP), launched in 2010, was developed jointly by the Gladstone Regional Council, Gladstone Economic and Industry Development Board and the Queensland Department of Infrastructure and Planning. This coordinated plan identified gaps in existing social infrastructure, developed priorities for future infrastructure provision, prepared detailed budgets and proposed potential joint funding and management plans to deliver infrastructure provision.

Some of these initiatives have been successful, others less so. Generally speaking, most regional planning initiatives are such recent developments and it is too early to say how effective they will prove to be, as demonstrated by the

Galilee Basin Economic and Social Impact Study. This independent study was widely viewed by interview participants as a successful initiative that failed to gain traction with government. Its purpose was to provide baseline and projected economic and social information on the Galilee Basin and the research was funded jointly by DEEDI, the Barcardine Regional Council, Central Western Queensland Remote Area Planning and Development Board and the Central Highlands Development Corporation. There were criticisms of a lack of transparency within government and the report has only been made publicly available relatively recently – and with a disclaimer from Minister Mulherin attached, citing concerns about ‘the veracity of the data’ (Economic Associates, 2010, p.1)

Surat Basin Regional Planning Framework

This non-statutory document seeks to provide an integrated framework to shape and to link different types of plans (including economic development, land use and catchment management plans) and different levels of planning (community, local, and statutory regional plans) and also Environmental Impact Statements for major projects in the region.

The document outlines eight strategic directions for the region. It indicates that cooperation among a broad range of stakeholders, diverse sources of information and knowledge and enhanced coordination are deemed essential ingredients of strategies to ensure sustainable future growth for the region.

<http://www.waytogrow.qld.gov.au/u/lib/planning-framework.pdf>>

Multi-sector bodies

Another response strategy that shows promise has been the emergence of 'hybrid' or multi-sector bodies to address complex social issues. This development is particularly apparent at the regional level, where there are a number of bodies seeking to address cumulative impacts. A key feature of these organisations is that they typically contain government, (federal, state and local), community and industry representatives.

Regional Development Australia (RDA) committees are examples of multi-sector bodies involved in planning and resourcing in all regions of Australia. However, hybrid organisations are particularly a feature in Queensland and New South Wales, where multi-sectoral collaborations are increasingly being viewed as the most promising means of addressing land use conflict. Examples of these hybrid organisations include the Moranbah Cumulative Impacts Group, the Fitzroy Partnership for River Health, the Upper Hunter Air Quality Monitoring Network and Clermont Preferred Futures. Table 4 provides a comparison of some of these collaborative organisations.

While the purposes of these bodies may be very different, they do, in fact share a number of common features. First is a focus on multi-sector collaboration - bringing together different levels of government, concerned citizens and private sector representatives. For these different interest groups to work together effectively, it is important for all members to agree on what is credible data to inform their decision making, to have in place well-defined terms of reference and to have the capacity to stay focused on the task at hand. There also needs to be openness to exchanging information, changing behaviour, sharing resources, risks and responsibilities and enhancing

each other's capacity for mutual benefit and to achieve a common goal.

Working within multi-sector organisations is challenging because collaborating and dealing with conflicting values takes time, trust and a commitment to breaking down 'turf' barriers. The evidence from this research is that some groups are taking on this challenge and are beginning to find ways of working cooperatively together.

Liverpool Plains Land Management (LPLM)

The LPLM Committee was established in the early 1990s in response to resource management issues affecting the economic viability and agricultural sustainability of landholders in the Namoi Valley. The committee comprises: eight landholder representatives from associated Landcare groups, representatives from the NSW Farmers' Association, heavy industries, the local Aboriginal community, community interest groups and the NSW Departments of Primary Industries, and Water and Energy.

Agency personnel from the two state government departments provide input and assistance to the Committee and the LPLM has a small staff.

LPLM plans and implements a range of projects that are consistent with their Catchment Investment Strategy utilising science-based approaches, strategic partnerships, and regular information sharing and practical support to enable landholders to create sustainable land management practices.

Table 4: Examples of ‘hybrid’, multi-sector bodies in Queensland and New South Wales

	Liverpool Plains Land Management Committee	Surat Basin Engagement Committee	Fitzroy Partnership for River Health	Clermont Preferred Futures
Sectors/ groups involved	Landholder Representatives from associated Landcare groups, representatives of the local councils, NSW Farmers’ Association, intensive industries, the local Aboriginal community and community interest groups and the NSW Departments of Primary Industries, and Water and Energy.	Local government, landholder representatives, agricultural and catchment groups, state government departments, CSG companies, Qld Resources Council and the Australian Petroleum Production and Exploration Association (APPEA)	Mining, agriculture, state government, local government, energy companies, research organisations	Isaac Regional Council, Rio Tinto Coal, Clermont Community and Business Group and community representatives.
Scale	Namoi Valley	Resource region	River catchment	Local community
Structural arrangements	A catchment management committee operating with state and federal government support and with a small paid staff. Project planning and implementation role.	Initiated by Queensland government with an advisory role. It has a consultative sub-committee and a scientific sub-committee.	Auspiced by the Fitzroy Basin Association Regional NRM group with seed funding from state government. Funding formula adopted for ongoing resourcing. Serves a monitoring and implementing role.	Hosted by Isaac Regional Council with a paid project officer, a community steering committee and a planning and implementing role.
Purpose and focus	Resource management to ensure economic viability and agricultural sustainability of land in the Namoi Valley.	Socio-economic infrastructure, workforce and skills, water, ecosystems	An integrated monitoring system for waterway health	Social infrastructure, community development, lifestyle and liveability, and economic diversification
Resources shared	Scientific data, general information and practical support.	Community and scientific perspectives on impact assessments and forward projections.	Information, technical expertise, monitoring data and equipment.	Economic projections, aspirations and visions, feasibility studies, housing strategy.

Mechanisms of adaptive governance

Perhaps the most important finding from this research project is that adaptive governance means turning away from the search for a perfect solution. While it is important to seek clarity and reduce uncertainty, it does not follow that more data, more money, better coordination and planning or even a clearer delineation of the respective roles of government and industry, will resolve complex governance problems. The timing and extent of resource sector growth and contraction cannot be predicted with any great degree of certainty. Nor can impacts necessarily be known in advance, due to complex interaction effects. The desire for absolutes inhibits the capacity for adaptive governance solutions.

Adaptive governance mechanisms acknowledge constraints and find ways of negotiating contested terrain. They:

- disperse rather than centralise power and support collaboration among diverse stakeholders
- incorporate knowledge from multiple sources
- address complexity and uncertainty in flexible ways
- consider and accommodate potentially conflicting values, and
- tolerate varied, partial, temporary and inelegant responses.

Adaptive Governance of Cumulative Impacts in the Hunter Valley

There has been coal mining in the Hunter Region for over 150 years and today it is the largest coal-producing region in NSW. By the mid 2000s concerns were raised about the successive, incremental and combined impacts of the local coal mining operations.

Adaptive Governance of Cumulative Impacts in the Hunter Valley (cont'd)

Decreasing air quality was one matter of concern. For example, Upper Hunter ambient air quality monitoring data showed coalmines making over sixty breaches of dust emission guidelines in a five year period. A second concern related to pressures on salinity levels in the Hunter catchment from coal mining but also from agriculture and electricity generation. Successive studies have resulted in new management strategies for such problems. For instance the Upper Hunter Air Quality Monitoring Network is now funded by industry but operated by the NSW Office of Environment and Heritage thus satisfying two criteria for managing cumulative impacts – the need for collective action and the value of an independent umpire. Real time monitoring results can be viewed at <http://www.environment.nsw.gov.au/AQMS/aqi.htm>

In the case of water quality, market-based mechanisms have been adopted. The Hunter River Salinity Trading Scheme characterises the total allowable discharges of salty water within catchment thresholds as 1000 'credits' and stakeholders hold a licence for a certain number of credits which permits them to discharge salty water into a river under defined flow conditions and when the salt concentration in the river is low. Credits may be traded among stakeholders in the marketplace (NSW EPA, 2003). As in the case of the Air Quality Monitoring Network, the Hunter River Salinity Trading Scheme involves diverse stakeholders, including companies and the regulator, and reports publicly. The ownership of credits, their price and the volume and concentration of discharges are publicly reported to the community: <http://www.environment.nsw.gov.au/licensing/hrsts/success.htm>

Recommendations

The data for this research project suggest that, overall, local governance arrangements are working quite well in regions where resource development is occurring at a modest rate. As illustrated in the various case studies in this report, there are many examples of individuals and groups working successfully at the local level to address specific impacts and to realise the economic benefits of mining in their communities.

Our findings indicate, however, that mining-intensive regions, notably the Bowen Basin and the Pilbara, face significantly greater challenges. The scale of development activity and the rapidity with which new projects are coming on line is placing enormous pressures on affected communities, local and state government authorities, and resource companies. Managing for change during a period of rapid expansion is inherently difficult – and the task becomes even more complex when the high levels of uncertainty that typically accompany large scale resource development are factored in. The cyclical nature of the demand for commodities and the variability of socio-economic impacts through the different stages of the life cycle of a mining operation, lead to unpredictable outcomes for governance actors.

The following recommendations are intended to provide guidance as to how different stakeholders may address some of the major challenges that emerged in the research. They relate to the key issues of planning and regulation, council capacity and collaborative approaches.

Planning and regulation

Many project participants identified major shortcomings in current planning processes, particularly at the state and

local council levels. The research findings suggest that more organic, local initiatives, rather than an overarching policy framework is most likely to lead to successful planning outcomes. While many participants advocated more streamlined planning processes, and there is much to be said for a cohesive regulatory framework, there was no consistent view as to how this might be achieved. This is an example where greater collaboration around specific regulatory problems may prove fruitful.

Development applications

One of the criticisms levelled at Councils is that there are often lengthy delays in assessing and processing development applications. In this context, there is scope for companies to reduce demands on local government by creating and supporting industry-led initiatives to facilitate development application and planning processes. There is also a significant role for state governments to play in expediting planning processes. We therefore recommend that:

R1: Local council authorities are engaged much earlier in information sharing and decision-making processes by state governments and mining companies when new projects or major expansions are in the pipeline.

R2: State governments provide additional resources to councils to enable them to prepare their responses to EISs and SIAs in a timely manner.

R3: State governments give consideration to strategic regional assessments, rather than having resource companies develop environmental and social impact statements on a project-by-project basis.

R4: State governments collect baseline data to build a common knowledge base that is accessible to all stakeholders. A comprehensive baseline study, funded by project proponents and executed by local and state government in a given region could become a resource to aid future planning.

R5: State governments collect data on non-resident workforces. Other state governments may wish to consider the approach currently adopted by the office of economic and Statistical Research (OESR) in Queensland

Council capacity

Another recurrent theme throughout the interviews was the capacity constraints experienced by local councils; in particular, the inability to attract and retain skilled employees. Mining companies commonly 'poach' local government employees to staff their own operations and are able to attract them by offering higher wages and often subsidised accommodation. There is an opportunity for mining companies to redress the balance by providing assistance to Councils through the following mechanisms:

R6: Mining companies work with local councils to develop housing and accommodation policies that ensure availability of affordable housing and accommodation for council and other essential services employees

R7: Companies support apprenticeships attached to local councils.

R8: Companies provide funding to support particular roles within council. There are examples of this working in Emerald and Dysart, for example, where positions for Community Development officers are funded by local mining companies.

Collaborative approaches

Finally, collaborative initiatives that build trust and encourage information sharing can smooth administrative processes, reduce duplication in effort and lead to the better management of the social impacts of resource development. Therefore, we recommend that:

R9: Mining companies, local councils and state government collaborate more at the regional level.

R10: State governments take responsibility for identifying lead agencies to manage collaboration at the regional level.

R11: Councils in mining-intensive regions may wish to consider the NSW Mining Related Councils model as one means of working together collaboratively to share information and leverage advantages. An alternative model is the Local Leadership Group in each Queensland resource region.

R12: Mining companies reassess their social spend and community engagement priorities and align them with Council community (development) and social infrastructure plans.

R13: Mining companies collaborate with each other and pool their social spend to support larger scale social programs that contribute to a lasting legacy for mining communities. This need not preclude 'branding' opportunities

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Appendix 1: Research outputs

Journal Articles

1. Cheshire, L., Everingham, J. and Pattenden, C. (2011) 'Corporate sector involvement in the governance of mining-intensive regions' *Australian Geographer* Vol 42 (2): 123-138
2. Everingham, J.(In press) 'Towards social sustainability of mining: The contribution of new directions in impact assessment and local governance' C. Galea (Ed) *Change management for sustainability: Celebrating our wins, learning from our failures* (Greenleaf Publishing) (Accepted 28/4/2011)
3. Everingham, J. (In press) 'Governance to Achieve Social Sustainability of Mining in Australia. A Case for Collaboration, Coexistence and Corporate Citizenship' *Greener Management International* (Accepted 6/1/2012)
4. Everingham, J., Pattenden, C., Klimenko, V. and Parmenter, J. 'Regulation of resource-based development: Emerging governance challenges to sustaining mining communities in Australia' *Environment and Planning C: Government and Policy*. (Reviewed and resubmitted)
5. Everingham, J. and Barclay M.A. 'Varied forms of public organizing; lessons from the governance of mining regions in Australia' *Organization Studies*. (Reviewed and resubmit in progress)
6. Everingham, J. and Pattenden C. and Barclay, M.A. 'Prospects for rural development through a multifunctional mining industry?' *Journal of Rural Studies* (Reviewed and resubmit in progress)

Presentations

1. Everingham, J. (2010) "Emerging governance arrangements for sustaining mining communities in the Australian context" *Annual Conference of the Association of American Geographers*, Washington, 14-18 April.
2. Pattenden, C (2010) 'ARC Project', *Association of Mining Related Council's joint session*, Newcastle, February
3. Pattenden, C & Everingham, J. (2010) ARC Project, *Mining and Community Research Forum* Mackay
4. Pattenden, C & Everingham, J. (2010) ARC Linkage Project: Local government, mining companies and resources development in regional Australia: meeting the governance challenge *Science Into Society Group CSIRO Pullenvale* 2nd November
5. Everingham, J. (2011) 'How are communities negotiating the social and economic impacts and benefits of resource developments?' *LGAQ Economic and Regional Development Conference*, Gladstone, 18-20 May
6. Barclay, MA. & MacDonald-Hill, M. (2011) 'Changing times, changing governance arrangements: New roles and responsibilities for resource companies, councils and communities' *NSW Minerals Council Environment and Community Conference*, Wollongong 23-25 October

7. Pattenden, C. Everingham J. & Oñate-Santibáñez, B. (2011) 'Cross-sectoral Governance: A comparison of international responses to mining and community impacts' *SRMINING. First International Seminar on Social Responsibility in Mining* Santiago, Chile. 19-21 October.
8. Everingham, J. & Pattenden, C. (2011) Sustaining Resource Communities: A case for collaboration, coexistence and community considerations in mining affected regions of Australia. *Sustainable Development in the Minerals Industry*. Aachen, Germany. 14-17 June.
9. Everingham, J. (2011) "New Directions in Governance to Achieve Social Sustainability of Mining in Australia: Collaboration, Coexistence and Corporate Citizenship," *Sustainability 2011, 7th international conference on environmental, cultural, economic and social sustainability*. University of Waikato, Hamilton NZ , January 5-7
10. Pattenden, C. & Everingham, J. (2011) 'Governance in Mining Intensive Regions: Emerging Practice, Innovative Responses' (ARC Linkage Project) *CSIRO Mineral Futures Cluster Workshop*, Brisbane 31st January