Water, Communities and Mineral Resource Development — Understanding the Risks and Opportunities

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ABSTRACT

Issues around water – its quality, use, availability and environmental value – can be a major point of tension between mineral projects and local communities. Failure to manage these issues appropriately can jeopardise the obtaining of regulatory approvals for new projects and place at risk the 'social licence to operate' of existing operations. Conversely, there may also be significant opportunities for companies to engage constructively with communities over water issues and to make a positive contribution to the sustainable development of these communities.

Using case studies, this paper will explore the various types of social risks and opportunities associated with water and mineral resource development and identify key learnings relating to the management of these issues.

INTRODUCTION

This paper has two broad objectives: firstly, to highlight the need for planners, managers and regulators of minerals resource projects to factor in the 'social' dimension when addressing the sourcing, use and disposal of water; and secondly, to provide guidance on how the social risks and opportunities associated with water might be better managed. The paper uses primarily Australian examples, but refers to the international context where relevant.

The first section of the paper examines the relationship between 'social risks' and 'business risks' in the context of water and minerals resource development. Section two summarises the findings of research on the factors that shape community responses to large-scale resource developments. Section three identifies possible strategies for managing and mitigating the social and business risks that arise from community concern about potential impacts on water quality and availability. The final section explores the potential for mineral operations to deal with water issues in a way that not only controls risks for the business but has the potential to provide positive outcomes over the longer term for communities.

SOCIAL RISK AND BUSINESS RISK

In the context of the minerals industry, a *social risk* exists whenever there is the potential for an existing or planned project to impact adversely on one or more social entities (such as residents of nearby communities, Traditional Owners, adjoining landowners or local businesses). Examples of potential negative impacts include actual or perceived loss of amenity, economic loss, diminished sense of personal wellbeing, reduced community cohesion and increased exposure to health and safety risks. Depending on where a project is located and the relative vulnerability of the host community(ies), social risks may be minor, highly localised and relatively easily mitigated; or, they may be wide ranging and potentially severe (Miranda *et al*, 2003).

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Social risks can – and often do – translate into significant *business risks* if they are mishandled. Where social actors are adversely impacted by a development, or *perceive* that they have been, or might be in the future, they may act in ways that cause detriment to the project and the companies associated with it. These actions may include:

- generating negative media publicity about a project,
- applying political pressure to block or delay planning approvals,
- lobbying governments to impose stricter regulatory controls on current and future operations,
- making complaints to the operation and/or regulators,
- initiating legal action for compensation,
- engaging in blockades and demonstrations,
- organising consumer boycotts of products,
- linking with influential external organisations (such as international NGOs), and
- opposing the relinquishment of leases.

At the bottom end of the scale, the costs of these actions may be relatively minor (for example, short-term negative publicity at the local level) but in other instances they may add significantly to the costs of an operation, prevent it from expanding, stop it from proceeding at all, or force its premature closure. Some recent examples from the Australian resources sector illustrate these points; in each of these cases, water was part of the 'mix' of issues that attracted community attention and concern:

- BHP Billiton changed its plans to conduct longwall mining under and adjacent to the Nepean River, in response to community concern about the impact that mining subsidence had previously had on the nearby Cataract River (Illawarra Coal, 2006, p 10).

- Xstrata's Macarthur River open cut project has encountered substantial – and apparently unanticipated – difficulty in obtaining regulatory approval from the Northern Territory Government. A key feature of the project is a proposed 5.5 km diversion of the Macarthur River. The proposal has been strongly opposed by Northern Territory environmental organisations and Traditional Owner groups. According to the Environment Centre of the Northern Territory concerns have been expressed about:

  - Long-term impacts on the McArthur River associated with the re-routing of the river and construction of artificial watercourses. The McArthur River has high biodiversity, recreation and cultural values. The proposal has triggered the EPBC Act with a listed threatened species, the Freshwater Sawfish (Pristis Microdon), and listed migratory species known to inhabit the river (ECNT, 2006).

- Plans by Sydney Gas to mine for methane gas from coal seams under the valleys west of Wyong in New South Wales have been stymied by a campaign led by well connected local landowners, including celebrities such as author Bryce Courtenay, former premier Neville Wran and radio commentator John Laws. A central theme of the campaign was that the area was a key water catchment for the central

New South Wales Coast and mining was likely to have an adverse impact on the water table and water quality. The focus of this campaign has now shifted to blocking Korea Resources Corporation's proposed Wyong coal mine (*Environment Management News,* 11 August 2006).

- Community pressure has been instrumental in QNI's nickel refinery at Yabulu in North Queensland developing a plan to utilise grey water from local councils, as a means of reducing the operation's draw down on the Black River Wellfield (Farmer, 2006).

In some circumstances, long-term harm can be done to corporate reputations through the mishandling of social risks associated with water. In order to survive and be profitable over time, minerals companies need to be able to secure access to new resources and obtain capital and insurance on relatively favourable terms (Harvey and Brereton, 2005). Companies that are seen to have mismanaged the social and/or environmental dimensions of a resource development are likely to be disadvantaged in this regard.

In the international context, there are several well documented cases of where mining companies have experienced severe losses, in the form of compensation payments, inability to access resources and significant reputational damage, because of their failure to effectively manage social and environmental issues relating to water. Three prominent examples are Ok Tedi in Papua New Guinea, Placer Dome's Marcopper operation in The Philippines and Newmont's Yanacocha operation in Peru.

Perhaps the most publicised controversy involves the Ok Tedi mine in Papua New Guinea. This mine disposes tailings and waste rock into the Ok Tedi River, which flows into the Fly River. Disposal of waste rock and tailings into this river system has caused environmental damage, including a change in the physical form of rivers, increased risk of flooding resulting in dieback of vegetation, damage to the aquatic ecosystems and increased levels of minerals and process chemicals in the water. This damage has extended beyond the environmental sphere, with substantial adverse effects on the livelihoods – and possibly the health – of local and downstream communities. The damage caused by Ok Tedi provoked legal action from landowners, efforts from downstream communities to close the mine, generated damaging publicity for BHP (as it then was) and was instrumental in the company's decision to withdraw from the project (Banks and Ballard, 1997; Banks, 1998; MMSD, 2002). Financial costs included payment of US$49 M in compensation to landowners and a US$416 M write-off of the investment when the company withdrew (Miranda *et al*, 2003, p 13).

The Marcopper mine was accused of dumping millions of tonnes of toxic mine waste into the sea and local rivers of Marinduque Island, triggering claims that the mine had caused massive local health and environmental impacts and loss of livelihood (Oxfam, 2004; Plumlee, 2000). This was strongly contested by Placer Dome, a part-owner of Marcopper, but regardless of who was 'right', the company suffered significant reputational damage and this episode has also been damaging to the standing of the mining industry generally in the Philippines. Direct financial costs included a total of US$43 M in after-tax charges to earnings and US$4.5 M in fines (Miranda *et al*, 2003, p 13).

A third example of what can go wrong is Newmont's failed attempt to extend its Yanacocha gold mine in the Andes of Peru. In 2002, Newmont proposed to extend the mine to Cerro (Mount) Quilish, a local deity and an important source of water for the city of Cajamarca. In 2002, due to local concerns about water contamination, Cerro Quilish was declared a protected area. The company challenged this decision in the courts and won the right to mine, providing it first conducted an environmental impact assessment. When excavations began in 2004, members of the community blocked the roads to the new mine and many were involved in violent protests. Soon after, Newmont announced the company was relinquishing its exploration permit at Cerro Quilish, acknowledging that:

> *it was clear that we failed to appreciate the level of social stress generated by Yanacocha's rapid development and the profound concern expressed by some of the citizens living near Yanacocha's Cerro Quilish deposit* (Newmont, 2004).

In this instance, community conflict around water not only cost the company a significant deposit at Cerro Quilish, but damaged its reputation and undermined stakeholder confidence.

Not all social risks will be manifested as business risks, especially in the short term. Some groups who are adversely impacted by a development may not necessarily 'connect the dots' and relate the detriment they have experienced to the project. Others may choose to put up with the detriment (eg reduced water or air quality) because they are economically dependent on the project. The ability of groups and individuals who are adversely impacted – or perceive that they will be – to mobilise against a development will also vary considerably, depending on factors such as: the number of people who perceive an actual or potential detriment, the felt intensity of that detriment, and their capacity to mobilise for effective action and to link with NGOs and other influential actors.

Where communities and affected groups are relatively powerless, the case for why companies should be attentive to social risks shifts out of the realm of pragmatic considerations to the sphere of ethics and moral responsibility. It is beyond the scope of this paper to explore this aspect in any detail, but a strong argument can be made that one of the hallmarks of a socially responsible company is a consistent commitment to minimising the social and environmental harms associated with its activities, *regardless* of how much pressure those who are exposed to these harms may be able to bring to bear on the company. Recent policy statements by industry associations (eg the Minerals Council of Australia's *Enduring Value Framework*) and leading companies have expressed similar sentiments.

A further reason why minerals companies need to take social risks seriously is because, increasingly, this is likely to be a requirement for obtaining finance and insurance, particularly for projects being undertaken in less developed countries. For example, the International Finance Corporation (IFC) has recently issued new *Performance Standards on Social and Environmental Sustainability*. These require developers of projects in receipt of IFC funding to conduct an assessment that considers 'all relevant social and environmental risks and impacts of the project' (2006, p 1) and to develop a management system and action plan based on that assessment. The guidelines also make it clear that affected communities must be consulted about what they see as the possible risks and negative impacts and how these should be addressed. Similarly worded requirements are to be found in the Equator Principles developed by the financial industry to guide lending practices for large-scale investments in the developing world.[3]

WHAT FACTORS SHAPE COMMUNITY RESPONSES TO RESOURCE DEVELOPMENTS?

There is a substantial research literature analysing the factors that shape community responses to mining projects and other large-scale resource developments. Much of this literature has an international focus, but many of the findings are also relevant to the Australian context.

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3. These principles can be accessed at http://www.equator-principles.com/principles.shtml.

At the most basic level – and not surprisingly – resource projects will tend to attract a negative response if significant sections of a community perceive that they will be, or have been, disadvantaged by that development. This perceived disadvantage may be primarily economic, for example: lower property values; reduced availability of water for agricultural or commercial purposes, and/or removal of land from productive use. Alternatively, or in addition, the disadvantage may relate mainly to perceived impacts on quality of life and amenity, such as landscape disturbance and loss of access to watercourses for recreational purposes.

It is important to recognise that community responses to resource projects are shaped not just by instrumentalist considerations, but also by the strong psychological and cultural associations that individuals and groups can have with particular areas. This is most readily apparent in the case of Indigenous people, where it is now generally acknowledged that natural resources and features (landscapes, watercourses, vegetation) can have strong spiritual significance to people (Bradley, 2001; Povinelli, 1993; Rose, 1996, 2002; Sharp, 2002). Consider, in this regard, the response of one Traditional Owner in the Macarthur River region to the proposal to divert the course of the river, reported on the ABC Stateline program in 2003:

> It is no good. I will be sick if they cut the place, because my spirit is there. All my songs are across the river. I don't want to see that thing happen in the Macarthur River (Environment Centre of the Northern Territory, 2006).

Non-Indigenous people likewise develop strong associations with particular areas. These associations may be to the landscape and natural features, but can also be to what a community represents in social terms. For example, people can be concerned about reduced availability of water for agricultural purposes not just because this may result in economic loss to producers and local businesses, but because it threatens to change the social make-up and identity of the area, and hence people's sense about what it means to live there. Mining companies that fail to acknowledge the significance of these non-economic values run the risk of significantly underestimating the depth and extent of opposition to projects that are perceived as having an adverse impact on these values. Water is a particularly potent issue in this regard, because it is relevant to a large number of people and has value at a number of different levels.

Another key determinant of how communities respond to resource development projects is the level of trust and credibility which they assign to project proponents/managers, key decision-makers and regulators, and other external sources of information and advice (eg NGOs). This factor is particularly critical in circumstances of uncertainty, as individuals are likely to have an increased dependence on external sources for their information. This is a key learning from the risk communication literature, popularised by the well-known American academic Peter Sandman (1989). Behaviourally, the more trusting an individual is, the lower the personal investment he or she will make in learning about the trustworthiness of the trusted and in monitoring and enforcing his compliance in a cooperative venture (Levi, 1998, p 78). Distrust typically plays a role in local environmental disputes (Smith and Marquez, 2000) and is often manifested in uncooperative behaviour or the severing of a relationship (Levi and Stoker, 2000, p 476).

Community responses to projects can also be influenced by the perceived fairness of the processes whereby key decisions relating to that project have been made. The public is particularly likely to rely on fairness principles to make judgements on risks and benefits when there is a lack of information about the trustworthiness of the decision maker (van den Bos, Wilke and Lind, 1998).

Prilleltensky and Nelson (1997, p 15) define the value of social justice as the 'fair and equitable allocation of bargaining powers, resources, and burdens in society'. There are two concepts of social justice that relate to conflict about natural resources: *procedural justice* and *distributive justice*. Procedural justice relates to the fairness of mechanisms in place to achieve allocation decisions, and distributive justice relates to the evaluation of whether the allocation of resources amongst stakeholders has been fair. There is a growing body of evidence indicating that social actors are more likely to be decision-making of an outcome if *procedural justice* has been demonstrated in the decision-making process that has led to that outcome (Muradian, Martinez-Alier and Correa, 2003; Peterson, 1994; Syme, Nancarrow and McCreddin, 1999). Procedural justice in this context refers to the perceived fairness of mechanisms for achieving allocation decisions. Conversely, processes that are seen as unfair are likely to generate suspicion and resistance.

Lind and Tyler (1988), drawing on Lane (1986) (as cited in Drew, Bishop and Syme, 2002, p 630) have identified a number of critical variables that can impact on perceptions of procedural fairness in the political arena, including:

1. *knowledge of procedures* – to evaluate a policy or decision people will need to be aware of how it was made,

2. the extent to which procedures *are consistent* with perceptions of what constitutes a fair process,

3. *voice* – peoples' perception of their opportunity to present their views, and

4. *shared values* – procedures will tend to be evaluated according to the extent that decision makers are seen to hold values and beliefs similar to those of affected groups.

Recognition that the concepts of equity, distributive justice and procedural justice are interconnected (Folger, 1996; Syme, Nancarrow and McCreddin, 1999) has provided the basis for the development of *Fairness Heuristic Theory* (van den Bos *et al*, 1997: Lind *et al*, 1993). This body of theory proposes that perceptions of procedural justice influence how the distribution of outcomes is evaluated (Syme and Nancarrow, 2001; Jorgensen, Syme and Nancarrow, 2006).

Muradian, Martinez-Alier and Correa (2003) have used Canadian Manhattan Minerals Corporation Tambogrande gold and silver project in north-west Peru as a case study to show how the concepts of justice, equity and trust can sometimes play a large role in determining public judgement of risks and benefits of development.

The proposal for the project required the town to be relocated and the riverbeds of the Piyra River (the largest river in the district) and the Carmelo stream to be embanked and displaced. The group 'Front of Defence', made up of predominantly farmers and peasants, strongly opposed the project. In February 2001, a large and violent demonstration took place in town. Approximately 5000 local residents stormed Manhattan company offices, burning machinery and destroying models of houses for relocation (Muradian, Martinez-Alier and Correa, 2003). After two attempts at negotiations had failed (May 2001 and October 2001), a referendum, funded by Oxfam UK, was organised by opposing groups for June 2002. According to Oxfam, 94 per cent of voters opposed the project, although Manhattan dismissed these results as invalid.

Using surveys and interviews, Muradian, Martinez-Alier and Correa (2003) concluded that local opposition to the project was based on the following three socio-cultural values:

1. *fairness* – people believe that the economic benefits and environmental burden of the project were unfairly distributed between the mining corporation, the central government and the local population;

2. *self-determination* – self-determination concerns prevailed over revenue increase considerations; and

3. *trust* – people in the community lacked trust in experts and institutions.

In summary this and other examples illustrate how a multiplicity of factors can influence the response of a community – and sections thereof – to a minerals development. These factors relate not only to the measurable environmental and economic impacts of the development but also to community perceptions, values, expectations and levels of trust. Companies that are not attuned to the important role played by attitudinal and perceptual factors are at danger of misjudging community reactions to development proposals and responding inappropriately.

MANAGING AND MITIGATING SOCIAL RISKS

Minerals companies are still in the relatively early stages of developing systematic processes for evaluating their social risks (Evans, Brereton and Joy, in press). However, the processes used in standard risk assessments can be adapted to this area. This basically entails an initial information gathering exercise, one or more workshops to prioritise risks and select 'controls', and development of a management plan based on the outcomes of the exercise. Some basic principles of good practice to apply in this regard are as follows.

First, there needs to be a genuine effort made at each stage of the process to obtain input from community members and other stakeholders – including those who may be considered hostile to the project. In this regard, the latest Australian/New Zealand Risk Management Standard (AS/NZ 4360-2004) emphasises that:

Communication and consultation are important considerations at each stage of the risk management process. They should involve a dialogue with stakeholders with efforts focused on consultation rather than a one way flow of the information from the decision maker to other

stakeholders … Since the views of stakeholders can have a significant impact on the decisions made, it is important that their perceptions of risk be identified and recorded and integrated into decision-making processes (Standards Australia 2004: 11).

Engaging with the community is important not only to find out what people's perceptions, expectations and concerns are, but also to help build relations of trust and give people confidence that their voices have been heard and their viewpoints valued.

Second, when addressing risks it is very important that the response is matched to the risk – a point sometimes overlooked by minerals companies when responding to community concerns. Put simply, responding to concerns about the reduced availability of water to other users by highlighting the broader economic benefits of mining will not assuage those individuals whose amenity or income may be adversely affected, or those who have an emotional attachment to preserving a particular way of life.

A third and related point is that companies need to use a mix of social and technical 'controls' when responding to social risks, rather than relying just on technical responses. Table 1 highlights some differences between technical and community-focused responses to issues relating to water quality and the problems that can arise when the focus is on the technical aspects alone. Good project design and planning can minimise the objective probability of a project having an adverse impact on water quality and/or availability, but this will be of only limited value if concerned groups in the community do not understand the technology being used, or lack confidence in the company and regulators. As commentators such as Peter Sandman continually emphasise, communication and trust are critical to effective management of social risks.

A final observation is that even with its best efforts, a company may not always succeed in controlling the social risks associated with a project. In some instances community opposition to a development may be implacable and no amount of engagement and communication will alter this situation. In such cases, the company will face the difficult choice of withdrawing from or

TABLE 1

Comparison of community-focused and technical responses to water issues.

Issue	Technical responses	Limitations of technical responses	Community-focused responses
Community concerns about the impact of mining/processing on water quality in streams, groundwater, marine environments, etc.	Design operation to minimise or eliminate discharges of poor quality water. Establish water quality baseline measures before operation commences. Set up monitoring systems to measure quality of water discharges and water quality in the receiving environment.	Community groups may not trust company and/or regulators. Monitoring data may not be accessible and/or comprehensible to laypersons.	Make monitoring data available in a readily accessible and understandable form. Use independent experts who are acceptable to the community to review data. Involve community groups in monitoring (eg taking water samples). Take an active role in local and regional initiatives to address water quality issues.
Concerns about the impact of mining/processing on environmental and landscape values (eg re-routing of watercourses).	Design operations to avoid/minimise disruptions of stream flows and landscapes. Provide technical data on expected impacts.	Communities are concerned not just about potential disruption of water flows, but the symbolic aspects of interference with natural features.	Work with community groups to identify off-set projects to improve/protect valued landscapes and ecosystems (eg revegetation of riparian environments).
Mining/processing seen as reducing availability of water for other uses valued by community.	Improve plant design and water management to maximise water use efficiency. Highlight the economic contribution of mining relative to other water users.	Communities may value other activities more highly than mining.	Look for opportunities to improve water availability and supply in the community. Involve community groups in the exploration of alternatives for meeting water needs (eg offsets).

modifying the project, or pressing on and wearing the reputational damage and other costs. Which of these options is selected will depend upon factors such as the level of government support, the strategic priorities of the company, and the magnitude of the business risks to which it is exposed. However, by investing time and effort into understanding its social risks, the company will at least have access to better information on which to base these decisions.

OPPORTUNITIES AND BENEFITS

Opportunities are essentially the inverse of risks. A *social opportunity* exists where there is the potential to take action to enhance the well-being of individuals and groups without causing significant detriment to others. Traditionally, companies and regulators have focused more on controlling risks – that is, things that could go wrong – than on pursuing opportunities to deliver positive outcomes for communities and regions. However, the growing emphasis on sustainable development has brought with it a recognition that being a good corporate citizen is about more than just minimising harm. This has been acknowledged explicitly in the ICMM principles and its companion document, the MCA's *Enduring Value*, where Principle 9 states that signatories will endeavour to:

> contribute to the social, economic and institutional development of the communities in which we operate.

Similar undertakings are contained in the published policies of individual companies. For example, BHP Billiton's Sustainable Development Policy includes a commitment to:

> develop partnerships that foster the sustainable development of our host communities, enhance economic benefits from our operations and contribute to poverty alleviation.

In the case of water, social opportunities may arise where there is scope for a minerals company to take action that improves the quality and or quantity of water resources available to the wider community. Examples of such opportunities include:

- Constructing infrastructure (dams, pipelines, etc) which is then made available to other users, either at the conclusion of mining or, better still, during the life of the mine. For example, BMA has delivered a water infrastructure to Bowen Basin, which is used by a variety of other users, such as pastoralists and towns. Subject to engineering issues, this infrastructure will remain when mining ceases (Evans, Roe and Joy, 2003).

- Providing resources (financial and in-kind) to restore wetlands and riparian environments, such as the Upper Hunter River Rehabilitation Initiative sponsored by Mt Arthur Coal and Bengalla Coal.[4]

- Initiating water conservation measures to protect water resources accessed by the community: for example, Olympic Dam's bore capping program in the Great Artesian Basin, which reportedly has resulted in a reduction of water being extracted from the Basin of around double of what Olympic Dam uses.[5]

- Using a mine void to create a water storage and recreational facility that can be utilised by the broader community, such as is being undertaken by Premier Coal at Collie in Western Australia (Premier Coal, 2005, pp 8-9).

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4. See http://www.hcr.cma.nsw.gov.au/uhrri/index.php3 for details of this initiative.

5. Testimony by Dr Roger Higgins of BHP Billiton to the House of Representatives Standing Committee on Industry and Resources, 2 November 2005.

These initiatives show what is possible, but across the Australian minerals industry more generally, there is little evidence to date of a strategic approach being taken to the identification and implementation of water-related opportunities.

The business case for addressing social risks associated with water is fairly self-evident, but what is the rationale for mining companies for focusing on the opportunity side of the ledger? First and foremost, the opportunity may itself provide a control for a risk. For example, the bore capping program initiated by Olympic Dam presumably would have helped to offset any community disquiet about the impacts of the company's operations on the Great Artesian Basin. Beyond this, there are potentially significant benefits to be derived from building up the company's stock of 'reputational capital'. Placing a dollar value on this form of capital is problematic in the extreme, but mainstream minerals companies clearly consider reputation to have value, as evidenced by the considerable effort that they have devoted in recent years – both individually and collectively – to improving how they are perceived in the wider community. Having a good reputation helps to reduce transaction costs, because external stakeholders are more willing to accept information and undertakings provided by the company and less inclined to question its motives. Also, when things do go awry, there is likely to be a greater willingness by stakeholders to 'forgive' than if the company concerned is regarded as untrustworthy.

Although there are potentially considerable business benefits to be derived from pursuing social opportunities relating to water, realising these benefits is not a straightforward matter. If a company has failed to properly manage its key social and environmental risks, initiatives to develop specific opportunities are likely to be dismissed as 'PR' and 'Greenwash'. Where there has been a history of strained relationships with a community, building trust and reputation will be a long-term process that requires sustained effort. Here, the challenge will be to find ways of persuading sceptical stakeholders in the community and beyond that:

1. the company's actions have indeed contributed to improved water benefits for the impact community; and

2. this is part of how the company does business, rather than just a one-off initiative.

This will require a comprehensive engagement and communication strategy, rather than just the occasional 'feel good' initiative. (For a useful general overview of the challenges that the minerals industry faces in identifying and realising opportunities see LaPalme, 2003.)

CONCLUSION

This paper has focused on the social, rather than technical, dimensions of water management in the minerals sector. A key theme is that water is a highly valued commodity not just because it has instrumental and economic value, but because it also has symbolic significance to diverse groups. The multiple values associated with water present complex engagement challenges for companies seeking to secure community support for projects, as well as for planning and regulatory authorities.

By understanding the social risks associated with the sourcing, use and disposal of water, companies will be better placed to take proactive steps to manage and mitigate these risks. There are also opportunities for minerals companies to deal with water issues in ways that can deliver long-term positive outcomes for communities. To date these opportunities appear to have been realised only infrequently in the Australian context, but if the industry is to follow through on its public commitments to sustainable development this will need to become a stronger focal point of activity in the future.

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