Managing Business Sustainability in the Australian Mining Industry

Author

Sarker, Tapan, Munro, Virginia

Published

2015

Book Title

Responsible Mining: Case Studies in Managing Social & Environmental Risks in the Developed World

Version

Version of Record (VoR)

CHAPTER 3

Managing Business Sustainability in the Australian Mining Industry

Tapan Sarker and Virginia Munro

INTRODUCTION

This chapter provides an overview of the Australian mining and minerals industry and explains how this industry and its advisory and regulatory body, the Minerals Council of Australia (MCA), addresses business sustainability. First, a brief discussion on the Australian industry's minerals and resources sector, from early beginnings to present day, provides a context to understand current sustainability activities. Within this context, the overall regulatory framework and various industry regulatory licenses are discussed.

To further understand the MCA's commitment to sustainable development, the 10 sustainable principles developed by the International Council on Mining and Metals (ICMM) are examined alongside the elements recommended for each principle. The MCA has used the ICMM guidelines and principles to develop frameworks for its members to adhere to. These frameworks include the Enduring Value Framework (EVF) and the Water Accounting Framework (WAF), which are individually detailed in this chapter. The guidelines for each element developed by the MCA are explained, as are voluntary membership and commitments as well as obligations to the EVF and WAF guidelines.

Also discussed are the additional frameworks being developed by the MCA for land-use planning and natural resource management, and the MCA's current work toward biodiversity offset reform under the Environment Protection and Biodiversity Conservation Act.

The chapter concludes with a discussion on MCA stakeholders and stakeholder involvement and engagement with regard to their influence on reform and

motivating voluntary compliance while also enhancing the movement toward themes supporting the "social license to operate."

THE MINING INDUSTRY IN AUSTRALIA

The Australian mining industry's minerals and resources sector has experienced unprecedented growth over the last decade, accounting for 60% of Australia's merchandise exports and about 8% of national gross domestic product (MCA 2012a). It is therefore acknowledged that mining is reasonably prolific in Australia with mining projects in every state and a variety of minerals and resources extracted from sites across the continent. The nine mining regions cover a large geographic area of Australia, stretching from remote interior communities in New South Wales (NSW) and central Queensland; to Kalgoorlie-Boulder in Western Australia; to the coastal mining, oil, and gas communities of Karratha; to as far north as Port Hedland in the Pilbara Region of Western Australia (MCA 2012a)

The last few decades have seen the development of sustainable programs and corporate social responsibility (CSR) policies in general, and this has led major mining companies to negotiate with Aboriginal traditional owners even in the absence of a legal requirement to do so (O'Faircheallaigh and Kelly 2001). A broad policy consensus in Australia then led to mineral development with the agreement of, rather than the opposition of, Aboriginal traditional owners (ATSISJC 2004; Beattie 2003).

The Australian government and the MCA have also agreed on an innovative partnership to improve the socioeconomic well-being of Indigenous Australians by expanding access to employment and business development opportunities available to Indigenous peoples and communities in mining regions. The new agreement builds on a partnership first commenced in 2005 and is set out in a memorandum of understanding officially launched in 2009 by the deputy prime minister (MCA 2009).

Mineral development in Australia today is increasingly controlled by a few large companies that operate across Australia's mineral-producing regions. The subsidiaries of these companies share information, and develop and implement policies and strategies across numerous projects and operations. Recognition of native title, legislative changes, and an emphasis on CSR policies creates opportunities for Aboriginal landowners to influence and benefit from mineral development (O'Faircheallaigh 2006).

As the impact of mining activity in communities has becomes more visible, "social performance" becomes one of the most widely disclosed categories. Other topics relating to controversial environmental impacts also began to be present and have been discussed in depth, such as the depletion of natural resources, economic impact on stakeholders, and comparability in a wider context. Each year stakeholders will expect more disclosure in all three dimensions of sustainability,

as well as transparent and mature discussions about relevant impacts (Perez and Sanchez 2009).

With regard to advancing mining and human rights, on October 28, 2013, the MCA and the Global Compact Network Australia released a publication to advance mining and human rights in Australia. According to MCA's chief executive officer, Mitch Hooke,

> Australian mining companies operate in increasingly complex social and political environments in which the imperative and the practical measures of respecting human rights are integral to contemporary operations. Demonstrating respect for the rights of the people living and working in mining-affected communities is critical to building and sustaining a project's social license to operate. Respecting human rights is not just the right thing to do, it also makes good business sense to earn and maintain the confidence of the community, starting with their basic human entitlements (MCA 2013a).

Looking at current situations today, and confirmed by Hooke, the minerals resources sector is considered to be one of the most regulated industries in Australia, with mining approvals typically requiring consent from local, state, and federal governments. There are also extensive periods of public consultation, comprehensive environmental and social impact assessments, lodgment of environmental bonds or securities with governments, and ongoing reporting and assessment to ensure that the operation remains entirely consistent with the heavily conditioned approval (Hooke 2012).

Additional policies have also been designed to protect particular regions of Australia. As a result, mining approvals in Australia now typically take between 5 and 7 years to complete and comprise a complex array of licenses and approvals from a range of government agencies (Hooke 2012). Increasingly, therefore, the mining and minerals industry in Australia and globally is governed by a strong regulatory framework.

Command and control regulation occurs through the state directly intervening in the market and mandating particular corporate behavior. In contrast, *voluntarism* is based on the belief that the individual firm unilaterally undertakes to do the "right" thing, although it may also involve the government playing the role of facilitator and coordinator (Gunningham and Sinclair 1998; Fallon 2009; Barkay 2009). *Self-regulation* has emerged whereby an organized group regulates the behavior of its members (OECD 1994). This usually takes one of three forms. First, *voluntary self-regulation* involves an industry or profession establishing codes of practice, enforcement mechanisms, and other methods for regulating itself entirely independent of government involvement. The second form is *mandated self-regulation*, whereby the state requires the business to establish controls over its own behavior but leaves the details and enforcement to the business itself (subject to state

approval or oversight). Finally, *mandatory partial self-regulation* is where the business is responsible for some of the rules and their enforcement, with the overriding regulatory specifications mandated by the state (Gunningham and Sinclair 1998).

An example of voluntary *self-regulatory* initiatives in the Australian mining and extractive industry is the Enduring Value Framework (EVF) developed by the MCA given that the MCA has developed a code of conduct for its members. The MCA may be considered to act as a surrogate regulatory organization, although its monitoring and enforcement abilities are limited. The adoption of the EVF is a condition of MCA membership.

The apparent gap between CSR policies endorsed by some companies and their level of compliance with the standards set out in those policies inevitably raises questions about the value of this type of regulation. It is important to understand that the weakness of much of the international and national indexes, and other soft regulation that form the base for most CSR programs, lies not merely in its voluntary form.

A significant body of literature, however, finds self-regulation to be more effective than command and control regulation, as it allows managers to act more proactively rather than reactively (May 2003; Newman and Bach 2004; Sarker 2008).

Notably, the principle of accountability in CSR provides an important conceptual linkage between the current risk paradigm and the notion of self-regulation. The former reflects a concern for corporate reputation through the well-known "audit" process, whereas the latter denotes a decidedly more ideal approach in which companies self-direct along agreed values and expectations (Kemp et al. 2012).

REGULATORY FRAMEWORK OF THE MCA AND THE AUSTRALIAN MINING INDUSTRY

The Minerals Council of Australia was formerly the Australian Mining Industry Council, established in 1960. Founded in 1995, the MCA is now the official advisory and regulatory body of the metallurgy, mineralogy, mining, and resources industry in Australia. Fundamental to the MCA's commitment to sustainable development is the concept of the "social license to operate": an unwritten social contract that supports and complements a "regulatory license" issued by government. The underlying regulatory framework of the MCA and mining industry discussed in this section describes this concept further.

The changing regulatory landscape in mining over the last two decades has seen an evolution in regulatory licenses from traditional *command and control* regulation to more flexible, principle-based, *voluntary* forms of regulation (Parker 2008; Posner 2007; Steinzor 1998). The MCA is embracing voluntary forms of regulation in the development of the EVF and WAF.

Very few studies have looked at the effectiveness of self-regulatory initiatives, such as the voluntary codes of conduct, in improving corporate performance on

the ground (Puplampu and Dashwood 2011; Barkay 2009). This is particularly important for environmentally and socially disruptive sectors such as the mining and petroleum industries, which have generally had a track record of poor CSR in the past. In addition, the failure to uphold good CSR standards by mining and petroleum industries will cause long-term social, environmental, and economic harm (Pennington and More 2010). Therefore, a need exists to find a voluntary regulatory instrument that can encourage continuous improvement of CSR in the mining and petroleum industries, and the adoption of voluntary codes of conduct will assist with this endeavor.

EFFORTS TO ADDRESS SUSTAINABILITY

The MCA is the peak national body representing Australia's exploration, mining, and minerals processing industry, nationally and internationally, and contributes to sustainable economic and social development across the industry (Port Jackson Partners 2012).

Today, the MCA is one of the nation's most significant industry bodies and has a long-standing commitment to sustainable development (MCA 2013b). Mining and mining-related companies apply for membership with the MCA and this membership is approved or not approved by the MCA board.

As of August 2013, member companies produce up to 85% of Australia's mineral output including precious metals, base metals, light metals and iron ore, as well as energy materials such as coal (MCA 2013g). MCA member companies also account for more than 90% of mineral export earnings. The minerals produced by member companies are as follows:

- Base metals—copper, lead, zinc
- Precious metals—gold, silver
- Coal—thermal, metallurgical, lignite
- Iron ore
- Uranium
- Minerals sands—rutile, zircon, ilmenite, titanium
- Light metals—aluminum, nickel, manganese, magnesium (MCA 2013e)

The MCA's key belief is that the future of the Australian minerals industry is inseparable from the global pursuit of sustainable development and states that "through the integration of economic progress, responsible social development and effective environmental management, the industry is committed to contributing to the sustained growth and prosperity of current and future generations" (MCA 2013b). The recognized definition of sustainable development referred to here is from the Brundtland Commission: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland Commission 1987).

By fostering sustainable development, the MCA hopes to enhance value for stakeholders and the broader community through its sustainable practices by creating industry awareness; maintaining uptake of sustainable development goals; providing leadership in environmental practices; providing continual improvement, excellence, and socially responsible minerals development; and increasing credibility and awareness of the industry's sustainable development activities. To achieve this, the MCA has recently established an Environmental and Social Policy Committee to better serve its member companies that are actively engaged in the effective integration of the environmental, social, and economic elements of minerals resource development. The council recognizes this as the key to operationalizing sustainable development.

The MCA advocates public policy and operational practice for a globally competitive minerals industry that is safe, profitable, innovative, and environmentally and socially responsible.

Key drivers of the MCA are as follows:

- An industry free of fatalities, injuries, and diseases
- A macro-economic framework conducive to sustainable economic growth and global competitiveness
- A skilled, productive, and flexible workforce
- Efficient transport infrastructure
- The reconciliation of energy security and climate change management as part of a sustainable global solution
- A seamless and efficient federation characterized by consistent regulation
- Access to competitive markets for capital, production inputs, human resources, and end products
- Access to natural resources and competitive markets for land, water, and energy
- A fair and stable society where effort is encouraged and rewarded, and support is extended to those in need
- Mutually beneficial relationships with indigenous and local communities through engagement and capacity building
- Improved environmental performance embracing long-term considerations for sustainable ecosystems beyond life of mine (MCA 2013e)

The self-assessment protocol of the MCA provides member companies with examples of the policies, practices, and standards a company might have in place to meet the requirements of the EVF and the WAF. Use of this self-assessment protocol is voluntary and is not a requirement for signatories to the EVF or WAF.

SUSTAINABLE DEVELOPMENT PRINCIPLES

The release of the sustainable development principles by the ICMM in May 2003 was integrated soon after into the practices of the MCA. The sustainable

Table 3.1 The 10 ICCM sustainable development principles

Principle 1	Implement and maintain ethical business practices and sound systems of corporate governance.
Principle 2	Integrate sustainable development considerations within the corporate decision-making process.
Principle 3	Uphold fundamental human rights and respect cultures, customs, and values in dealings with employees and others who are affected by our activities.
Principle 4	Implement risk-management strategies based on valid data and sound science.
Principle 5	Seek continual improvement of our health and safety performance.
Principle 6	Seek continual improvement of our environmental performance.
Principle 7	Contribute to conservation of biodiversity and integrated approaches to land-use planning.
Principle 8	Facilitate and encourage responsible product design, use, re-use, recycling, and disposal of our products.
Principle 9	Contribute to the social, economic, and institutional development of the communities in which we operate.
Principle 10	Implement effective and transparent engagement, communication, and independently verified reporting arrangements with our stakeholders.

Source: Adapted from ICMM 2003.

development principles are the global industry's commitment to manage social, health, safety, environmental, and economic issues in order to deliver sustainable shareholder value as well as to improve its performance in managing these issues and to publicly report industry progress in doing so (MCA 2005a).

This section briefly outlines the ICCM principles and examines what is involved in each principle. This is necessary to understand how the MCA has integrated these principles into its voluntary EVF and WAF. The 10 ICMM principles are listed in Table 3.1.

The ICMM continues to be innovative in its development of global guidelines, funding projects to assist ICMM members and other stakeholders such as a current study with the Centre for Social Responsibility in Mining at the Sustainable Minerals Institute (SMI) at the University of Queensland, Australia. This study explores a range of social evaluation frameworks that measure the impacts and outcomes of programs and considers the extent to which they measure the human and social development outcomes and contributions of mining projects and associated investments (University of Queensland 2013).

The aim of this project is to help ICMM and MCA members understand the methods available to measure human and social development impacts and to provide guidance on how to measure the effectiveness of their investments. The project also hopes to identify and review a range of existing indicators, frameworks, and methods used by a range of private companies, development assistance

organizations, and non-governmental organizations (NGOs). It also examines the extent to which such frameworks provide effective measures of impacts or outcomes and considers the potential for these to measure effectiveness of mining activities and associated investments, and their impact on the quality of life of communities (University of Queensland 2013).

ENDURING VALUE FRAMEWORK

The key role of MCA's EVF is to translate the principles of sustainable development given in Table 3.1 into practices and methods of reporting to ensure that the industry operates in a manner attuned to the expectations of the community and to maximize the long-term benefits to society through effective management of Australia's natural resources.

The EVF builds on the 1996 Australian Minerals Industry Code for Environmental Management—the platform for industry's continual improvement in managing environmental issues (MCA 2012b). Designed to assist managers, the EVF helps the MCA implement sustainable commitment in a practical and operational manner, targeted at site level (MCA 2005a). The EVF requires companies to seek continual improvement in environmental performance and implement effective and transparent engagement, communication, and independently verified reporting arrangements with stakeholders (MCA 2012b).

The framework provides practical ways to implement and report on these issues through a list of elements designed to address each principle. An element for each principle listed in the preceding section is given an implementation guidance factor for the EVF. For example, the first and second element listed for Principle 1 gives the implementation guidance shown in Tables 3.2 and 3.3, respectively.

The EVF is also complemented by a range of tools, guidelines, and extension activities such as training courses to deliver enhanced industry capacity in social and environmental competencies, leading to opportunities to improve performance "on the ground." Each element in the EVF also allows for cross-referencing between elements and therefore fully covers all aspects of training, implementation, and reporting.

The 10 principles and their elements and guidelines (Tables 3.1 through 3.3) reflect the potential that the mining and metals sector has in social development and poverty alleviation, where governments have implemented supportive policy and governance frameworks. In particular, members of the ICMM and MCA have committed to contribute to this through Principle 9, with the recent launch of a report that illustrates the methods available to measure human and social development contribution in the mining and metals industry. The report, titled *Approaches to Understanding Development Outcomes from Mining* (ICMM 2013a), is the first of two reports to be launched around the topic of social development in the industry. The report illustrates the methods available to measure human and social development contributions and consider the applicability of these methods for use in the

Table 3.2 Element 1.1

Develop and implement company statements of ethical business principles and practices that management is committed to enforcing.
Implementation guidance: • Develop a company statement of ethical business principles and practices that the board of directors endorses and monitors. • This statement should reflect the 10 ICMM principles and their supporting elements, which are intended to deliver sustainable shareholder value through commitment to improving social, health, safety, environmental, and economic performance. • This statement could establish a business code of conduct for employees, consistent with sustainable development principles, and mandate mechanisms for reporting on adherence to the code. This code might cover expectations of behavior in relation to elements of the principles. • This statement should commit the company at every level to enabling its people to learn how to behave in principled ways and account for their performance. For examples of learning requirements that may impact on most or many employees and contractors, refer to Elements 1.2, 2.5, 3.4, 5.3, and 9.2 (in MCA 2005b).

Source: MCA 2005b.
Note: For a full list of implementation guidelines for each element and principle, please see the *Guidance for Implementation* document on the MCA Website.

Table 3.3 Element 1.2

Implement policies and practices that seek to prevent bribery and corruption.
Implementation guidance: • Bribery includes making promises as well as actually paying money or providing goods, services, or favors to illicitly influence official decisions or acts. Implement a "no-bribery" policy based on an informed view of relevant law, regulations, and international conventions. Competent legal advice is useful (see Element 1.3 in MCA 2005b). • Some payments that may be seen as attempts to influence official decisions and acts may be legal and regarded as proper within particular jurisdictions and recognized conventions. Transparency is a key issue, so policy should be developed and systems should be put in place to record and report on decisions and transactions related to – Political contributions, including direct or indirect contributions to political parties, organizations, or individuals involved in politics; – "Facilitation payments" to low-ranking officials for processing licenses or other functions; – Charitable contributions and sponsorships; and – Payments made to comply with particular statutes (see Elements 1.1, 1.3, 3.4, 10.1 in MCA 2005b). • Train employees to apply the no-bribery policy and use systems to ensure that relevant issues are recognized, recorded, managed, and reported transparently. – Implement systems for managing allegations or suspicions of business misconduct in confidential, professional ways consistent with due process (see Elements 3.2, 3.4 in MCA 2005b).

Source: MCA 2005b.
Note: For a full list of implementation guidelines for each element and principle, please see the *Guidance for Implementation* document on the MCA Website.

mining and metals sector. The report provides ICMM member companies with a range of options to measure social return on investments in social and economic infrastructure and related projects.

The second report, *Community Health Programs in the Mining and Metals Industry*, focuses specifically on community health partnerships (ICMM 2013b). As part of this endeavor, the Partnerships for Development Toolkit (ICMM 2011) and the Community Development Toolkit (ICMM 2012) have been developed to evaluate the positive and negative economic and social effects of mining at local, regional, and national levels. The toolkits provide useful methodology for evaluating the positive and negative economic and social effects of mining at the local, regional, and national levels in mining countries. These methods will be of relevance in particular to the increasing numbers of lower- and middle-income economies that have high levels of mineral dependence. The application of the toolkit allows users to develop an improved understanding of what issues, policies, and practices may be helping or preventing host communities, regions, or the country from benefiting more fully from mining.

ADHERENCE TO THE EVF

Being a signatory to the EVF is a condition of MCA membership. Companies wishing to become signatories to the EVF need to sign a certificate pledging commitment to the EVF Principles and Elements, and its obligations. The principles of the EVF, therefore, apply to all activities of signatories and activities of contractors engaged by the signatories. All exploration, mining, and minerals processing companies and contractors are eligible to become signatories to the EVF provided they commit to the obligations.

Companies that commit to the EVF obligations are recorded on a register maintained by the secretariat, which is provided by the MCA. On occasion, signatories are asked to reaffirm their commitment to EVF, particularly following any review of its structure or requirements. In keeping with the voluntary nature of the EVF, a signatory may withdraw its commitment at any stage (MCA 2013d). To date, no withdrawals have been made from the EVF or MCA in this regard (Sarker and Gotzmann 2009).

In summary, commitment to the EVF requires the following obligations:

- Progressive implementation of the ICMM Principles and Elements
- Public reporting of site-level performance, on a minimum annual basis, with reporting metrics self-selected from the Global Reporting Initiative (GRI), the *GRI Mining and Metals Sector Supplement*, or self-developed
- Assessment of the systems used to manage key operational risks (MCA 2005b)

According to the MCA, the EVF will continue to be refined and developed in consultation with stakeholders as issues are identified that have not been addressed

in the current framework. In the interim, a number of benefits are already outlined with regard to implementing the EVF. Using the framework, for example, provides a public demonstration of due diligence to the community, external investors, and internal acquisition, and it can drive real change in organizations through social, environmental, and economic performance to improve bottom line (MCA 2005a).

A supporting study of the benefits of the EVF is provided by the Institute of Business Ethics (Webley 2003), which found that between 1997 and 2000, companies with a code of ethics generated significantly more economic value and market value than those without codes, irrespective of the sector, and they had a significantly more stable price/earnings ratio than those without a code (MCA 2013d). However, the key benefit of the EVF overall is that it is expected to provide guidelines on how to look after, maintain, and enhance the environmental, social, and community aspects in the surrounding areas where mining companies operate, therefore maintaining a company's social license to operate. As further evidence of MCA's commitment to address the environmental and social impacts of mining operations within Australia, an infamously water-stressed country, MCA has developed a water accounting tool for its members to use.

THE WATER ACCOUNTING TOOL

The water sector in Australia has also experienced reform. Much of the reform is associated with the National Water Initiative (NWI), which was signed on June 25, 2004, between the Commonwealth of Australia and the governments of New South Wales, Victoria, Queensland, South Australia, the Australian Capital Territory, and the Northern Territory. This intergovernmental initiative is considered a national blueprint for water reform agreed to by the Council of Australian Governments and is aimed at increasing the efficiency of Australia's water use, leading to greater certainty for investment and productivity, for rural and urban communities, and for the environment. This initiative was one of the NWI goals to improve water resource accounting to underpin sustainable water resource management and efficient water markets (Cote and Moran 2009).

When the mining industry adopted a formal approach through the sustainable development principles (ICMM) listed in Table 3.1, three core indicators relating to water were also included. Despite the GRI *Mining and Metals Sector Supplement* to guide the calculation of the core water indicators across sites—philosophical, technical, and stakeholder—perspectives indicated that there remained a gap between a site's operational water balance and the GRI report card for water use (Cote and Moran 2009). In addition, there was no agreed national standard for water use accounting in Australia at the time. There was, therefore, a strong need for a WAF to provide information related to the minerals industry water use that could be reported to the NWI and other stakeholders in a consistent manner, but also used as part of the GRI and other sustainability indicators (Cote and Moran 2009).

Table 3.4 GRI and WAF—source definitions mapping

	Water Accounting Framework	
GRI Category	**WAF Source Category**	**Input**
Surface water	Surface water Surface water Seawater	Rivers and creeks External water storage
Groundwater	Groundwater	Groundwater
Rainwater	Surface water	Precipitation and runoff
Wastewater	Wastewater	Third-party water
Municipal/utilities	Third-party water	Contract and municipal

Source: MCA 2012b.

The GRI indicators concerned with water management include

- EN8, total withdrawal by source;
- EN9, a list of water sources significantly affected by the withdrawal of water;
- EN10, the percentage and total volume of water recycled and reused;
- EN21, total water discharged by quality and destination; and
- EN25 size, protected status. and biodiversity of water bodies affected by discharge and runoff (MCA 2012b).

To understand how the GRI can be combined with the WAF, it is important to note the following source categories provided within the GRI.

- *Surface water:* Includes water from wetlands, rivers, lakes, and oceans
- *Groundwater:* (No definition supplied)
- *Rainwater:* Collected directly and stored by the reporting organization
- *Wastewater:* Supplied by other organizations
- *Municipal/utilities:* Includes water supplies from municipal and other water utilities

These categories can then be transferred from the input–output statement of the WAF model to show the interaction between the GRI and the WAF EN8. Table 3.4 illustrates this interface.

WAF development began in 2005 as part of a strategic program led by the MCA to gain improved understanding of minerals industry water use and use requirements among stakeholders involved in the water reform process and regionally with operations. The MCA's Sustainable Development Committee, which reports to the MCA board, has overseen the strategic development of the WAF, with the Water Working Group and the MCA secretariat responsible for the "hands-on" development.

In mid-2008, the SMI delivered its preliminary framework for consideration by the MCA's Water Working Group and Sustainable Development Committee.

In 2009, a pilot project in Central NSW was undertaken. This was a joint initiative of the MCA, SMI, and NSW Minerals Council. Building on the feedback from industry and governments during the stakeholder engagement in 2008, the Minerals Industry Water Accounting Pilot Project, a partnership involving the MCA, the NSW Minerals Council, the National Water Accounting Development Committee, and the SMI was established in 2009. The pilot project was completed in October 2009, and, following its completion, the MCA engaged with industry and other stakeholders (MCA 2012b).

Based on the pilot study mentioned previously as well as relevant feedback, the WAF was amended to its current form and launched in 2011. This WAF allows sites to account for, report on, and compare site water management practices. It has also been designed to align to the GRI and the Australian Water Accounting Standards. According to the WAF, MCA member companies have endorsed an initial phase of WAF adoption that includes the alignment of company water metrics and definitions consistent with the WAF's input–output model, as well as using these metrics to meet an existing company water reporting requirement (e.g., GRI requirements). The boundary of the operational facility is defined by the mining company to meet its reporting requirements as necessary. Typically, it will consist of the mine site, including mineral processing operations if present.

Previous to the development of the WAF, the water accounting systems were often not consistent across companies or operations. Understanding industry water use by company, region, or sector was therefore difficult. The WAF allows these comparisons and for water use by all users in the landscape to be compared in a quantified and transparent manner (MCA 2013c), providing a consistent methodology for the communication of how an operational facility interacts with water. This methodology is based on the consistent representation of these water interactions with inputs (the receipt of water to the operational facility), outputs (the removal of water from the operational facility), and diversion (water that is moved around or through the operational facility). The task-treat-store cycle represents what an operational facility does with its water and how it is stored (MCA 2013f).

In summary, the input–output model mentioned previously represents the intersection of the facility with the surrounding environment and community, and is a consistent method for reporting a facility's water balance. It lists all inputs by source and all outputs by destination, and interacts with the GRI framework as previously mentioned.

The second component of the WAF is the operational model, which is a consistent method for the calculation and reporting of water reuse and recycling. This includes store, treat, and task cycles within an operation (MCA 2013f).

MCA member companies have, to date, endorsed framework adoption. This includes alignment of company water metrics consistent with the WAF input–output model, annual public reporting on company aggregated water inputs and outputs using the WAF definitions and metrics, and input into MCA surveys on

water inputs and outputs for use in broader communication of aggregate mining sector water use by region or jurisdiction (MCA 2013f).

Water is not the only significant environmental issue that the MCA is addressing. The MCA is leading other efforts to concentrate on the environmental impacts of its member operations. This is discussed in the next section.

ALTERNATIVE MCA FRAMEWORKS IN DEVELOPMENT

The MCA is also developing alternative frameworks. These include land-use planning and natural resource management. The MCA has recently established an Environmental and Social Policy Committee to better serve its member companies that are actively engaged in the effective integration of the environmental, social, and wealth creation elements of minerals resource development and recognize this as the key to operationalizing sustainable development. The MCA's work in the sustainable development area is designed to achieve two overarching goals: (1) an Australian minerals industry enhancing value for stakeholders and the broader community through sustainable practices; and (2) a commitment by the Australian minerals industry to sustainable development through wealth creation, environmental leadership, and socially responsible development that is acknowledged by key stakeholders and decision makers.

The minerals industry continues to be actively engaged in the practical and effective integration of environmental, social, and economic aspects of resource development. Earning and maintaining the social license to operate and the practical implementation of sustainable development principles are defining features of modern mining operations.

Key features of the industry's approach to environmental management focuses on sustainable management of land, water, and energy; emissions management; materials stewardship; and biodiversity conservation. One of the key initiatives to give practical effect to this management approach, including the development of alternative frameworks for land-use planning and natural resource management, is to deliver transparent, rigorous, and sustainable decision-making processes founded in science and to better support the coexistence of mining, agriculture, and conservation. MCA acknowledges that there is a need for adopting more strategic land-use planning partly because the absence of a strategic planning approach to land use has led to increasing conflict regarding the intersection between mining and other land uses, particularly agriculture.

Reforms to regulatory approval processes for land-use planning are critical to ensuring effective decision making and project approvals. The MCA is currently establishing dialogue with the National Farmers' Federation and conservation organizations to develop better integrated land-use planning processes that balance social, environmental, and economic interests and that adopt the principle

of multiple and sequential land use. One significant way in which land use affects the local environment is through biodiversity impacts.

WORKING TOWARD A BIODIVERSITY OFFSET REFORM

The Australian mining industry has adopted an increasingly sophisticated approach to the assessment and management of biodiversity centered on the prevention and management of biodiversity impacts from mining and the identification of opportunities to enhance biodiversity conservation within the reach of its operations. One of the key initiatives to give practical effect to this management approach includes reforms to biodiversity offsetting arrangements under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The EPBC Act is the Australian government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places, which are defined in the EPBC Act as matters of national environmental significance. These reforms are organized to recognize industry investments in land rehabilitation and to enhance biodiversity outcomes through better placement in the landscape.

Impacts of minerals operations on biodiversity values can occur within and surrounding an operation. Following the application of the "avoid–minimize–mitigate" environmental management hierarchy, targeted actions can be implemented to compensate residual losses that are significant in terms of biodiversity values. Such actions are more often being advocated as "biodiversity offsets" and are becoming an increasingly important consideration of project planning.

The MCA advocates the development and application of biodiversity offset measures in accordance with the following principles:

- In support of the social license to operate, many companies may voluntarily implement conservation programs. Offset requirements should be complementary to these initiatives.
- Offsets should not be an automatic requirement by regulatory agencies for all impacts.
- Offsets should be developed to ensure no net loss of impacted biodiversity values and overall environmental benefit over the long term.
- Offsets required through regulatory mechanisms should be limited to the proportion of residual losses that are significant in terms of biodiversity values, based on best available scientific evidence.
- Offsets for residual impacts can include a package of "direct" and "indirect" measures that must be flexible in their development and application, and implemented over an appropriate time frame.

Consistent with the definitions of the Australian government, direct offsets provide on-ground protection and improved conservation outcomes for the impacted biodiversity values. On the other hand, indirect offsets are a range of other measures that improve knowledge, understanding, and management of the environment, leading to improved conservation outcomes for the impacted biodiversity values.

Where offset mechanisms are applied they should be

- Transparent in their calculation and development;
- Developed using the best available scientific information and include declarations about assumptions that underpin the science therein;
- Developed in a consistent, transparent, non-duplicative, and contemporaneous manner across jurisdictions involved in the regulatory process;
- Clear and certain regarding expectations for implementation and outcomes, including long-term management arrangements and liability for financial contingencies;
- Fair in sharing risks between the regulator and developer regarding the delivery of outcomes;
- Strategically developed to ensure that investments lead to the best value-for-money biodiversity outcomes across the landscape; and
- Clear in absolving the developer of reasonable responsibility in the delivery of outcomes when impacted by forces outside their control, including natural variability, acts of God, or willful damage by third parties.

MANAGEMENT AND ENGAGEMENT OF MCA STAKEHOLDERS

Stakeholder interests, needs, and feedback have become instrumental to the many changes within the industry and the adoption of voluntary codes and frameworks. Mining companies generally have a strong social license to operate. This unwritten social contract requires operating in a manner attuned to stakeholder and community expectations, while also acknowledging that businesses have a shared responsibility to government and, more broadly society to help facilitate the development of strong and sustainable communities (MCA 2013b).

In the MCA's *Enduring Value* guidelines booklet (2005a), the definition of *stakeholders* is taken from the Earth Summit (2002), which defines it as "those who have an interest in a particular decision, either as individuals or representatives of a group. This includes people who influence a decision, or can influence it, as well as those affected by it." The example that the MCA outlines is local community members, NGOs, governments, shareholders, and employees.

MCA stakeholders, therefore, are all those involved within the mining industry, including those who have an interest in the mining industry and those who are involved in or affected by mining and its processes. This also includes shareholders, internal stakeholders such as employees, and external stakeholders such as funding

agencies, banks, and socially responsible investment portfolios, industry organizations, regulatory bodies, community groups, NGOs, and the media.

In general, there is a growing recognition in the stakeholder literature on "good" institutions and their impact on human security. Stakeholders—who have become cognizant of the ability of multi-national organizations to either positively or negatively impact the human security of individuals—have driven this move (Quek and Sarker 2011; Munro 2013a).

It is widely accepted that social and environmental performance has been on the increase since the 1990s (Schiavi 2005). This has given rise to pressures placed by stakeholders on mining and oil and gas sectors (Sarker and Gotzmann 2009), and is also driven by the increasing momentum of NGOs supporting social and environmental issues (Brereton 2002; Rondinelli and Berry 2000; Sarker and Burritt 2005a). Recent studies suggest that violations continue to occur, but there are a number of important developments toward the full realization of human security when institutions operate in conflict states (Voluntary Principles 2011). Ensuring that their operations do not contravene fundamental human rights is not only good corporate citizenship, but it also helps protect the extractive industry from a range of adverse legal, political, social, economic, and reputational risks.

By following principles of the social license to operate, not only do stakeholders have an important part to play pressuring the government to impose command and control regulation, but they also influence the level of voluntary compliance firms take on board. Organizations need community acceptance in order to continue to operate. Maintaining the social license to operate is therefore important because failure to respond to community and stakeholder concerns runs the risk of expanding the command and control regulation, since governments and regulators are required to be responsive to public concerns (Gunningham et al. 2002).

The self-regulatory initiatives in the Australian minerals and petroleum industries were developed in response to stakeholder pressures. It is therefore reasonable to presume that self-regulatory initiatives will continue to be responsive to the changing views of stakeholders in the future, as failure to do so could engender a legitimacy crisis. Success in this will be assisted by building employee morale and supporting social initiatives and CSR activities with a community perspective, which are relevant to CSR strategy and driven by a company's core business (Munro 2013b). Therefore, it is of utmost importance that stakeholders are engaged in dialogues regarding CSR.

One of the MCA's key objectives is to engage stakeholders and to report back utilizing the GRI and social and environmental reporting. Understanding stakeholders and their perspectives is therefore extremely helpful when engaging stakeholders (Munro 2013a). Engaging stakeholders is particularly important in the mining industry because of the high levels of social and environmental impact.

To further engage stakeholders, the MCA has as a primary goal—the creation of an industry that enhances value for stakeholders and the broader community

through sustainable practices. It also acknowledges a commitment by the industry to sustainable development through wealth creation, environmental leadership, and socially responsible development. This in turn is acknowledged by key stakeholders and decision makers.

To achieve these goals the MCA promotes

- Industry awareness and effective uptake of sustainable development goals,
- Industry leadership in environmental practices and performance based on continual improvement and excellence,
- Continual improvement in socially responsible minerals development, and
- Progressively increased credibility and awareness of the industry's sustainable development activities (MCA 2013h).

In the present case, the MCA's EVF and WAF for mining, and the Australian Petroleum Production and Exploration Association's Principles of Conduct and Code of Environmental Practice were adopted in response to growing pressures from stakeholders requesting the industry be more socially and environmentally responsible. Numerous additional regulatory frameworks are also in the works.

CONCLUSION

As outlined in this chapter, the establishment of a regulatory framework in the Australian mining and extractive industry must be considered in a broader context of social and environmental scrutiny. The MCA has responded to industry needs by fostering sustainable development within the industry: establishing an Environmental and Social Policy Committee and developing the ICMM's 10 principles; implementing these principles by developing the EVF and WAF while also strengthening its own regulatory framework; and developing additional frameworks for land-use planning, natural resource management, and biodiversity offset reform.

A diverse range of regulatory mechanisms and frameworks with varying levels of enforcement that the government, minerals and mining industry bodies, and a range of stakeholders play a part in are necessary for proper regulation of the industry. In particular, the voluntary codes of conduct introduced by the mining and extractive industry and the oil and gas sector reflect the industries' need to engage in "beyond compliance" CSR activities to regain their legitimacy, or risk the imposition of costly command and control regulation as a result of public pressure on the state (Gunningham et al. 2002; Nilsen 2010).

Several researchers have noted that the adoption of the MCA's regulatory framework is regulation introduced in direct response to increased public scrutiny of the industry (Sarker and Gotzmann 2009). This suggestion is aligned to concepts of corporate accountability, whereby corporations have to account to their stakeholders, and hence their rights and freedoms should be balanced by obligations (Utting 2005). Fundamental to the existing regulatory framework is

the social license to operate, which further illustrates the MCA's commitment to ongoing advancements in sustainable development. As part of the social license, a stakeholder can "give" or "retract" their acceptance of a company's license to operate, further making knowledge of stakeholder perspectives and stakeholder engagement paramount to all organizations (Munro 2013a).

The experience of the Australian mineral and petroleum industries shows that companies are responsive to the expectations of their stakeholders. Companies that breach their social license to operate by poor social and environmental conduct must regain their legitimacy by going beyond compliance of general CSR actions. To do so often includes the introduction of voluntary codes of conduct or other self-regulatory initiatives that are not only designed to avoid more formal command and control regulation, but also restore the legitimacy of the industry in the eyes of its stakeholders. For an organization to be legitimate, its actions must be seen as normative by its stakeholders. Hence, development of the social license to operate helps restore organizational legitimacy, as does adoption of a CSR strategy.

This chapter has highlighted that voluntary codes of conduct are an important self-regulatory mechanism for the Australian minerals and petroleum industries in response to concerns about their social and environmental conduct. The introduction of voluntary codes of conduct is a signal by the industry that their CSR practices have improved. Accordingly, the MCA's frameworks were introduced in response to stakeholder concerns in an effort to maintain their social license to operate. Rather than being purely voluntary, these codes of conduct have enabled both industries to avoid more formal command and control regulation. Voluntary codes of conduct are, therefore, an important part of the regulatory landscape, and are part of a new era of regulatory pluralism and method of preventing a legitimacy crisis and an operational disaster while also engaging stakeholders in the company's independent CSR strategy.

REFERENCES

ATSISJC (Aboriginal and Torres Strait Islander Social Justice Commissioner). 2004. *Native Title Report 2003*. Sydney: Human Rights and Equal Opportunity Commission.

Barkay, T. 2009. Regulation and voluntarism: A case study of governance in the mining sector. *Regul. Gov.* 3(4):360–375.

Beattie, P. 2003. New Director to Practice "Practical Reconciliation." Media release. Brisbane. 15 September 2003.

Brereton, D. 2002. The Role of Self-Regulation in Improving Corporate Social Performance: The Case of the Mining Industry. Australian Institute of Criminology Conference: Current Issues in Regulation: Enforcement and Compliance. Melbourne.

Brundtland Commission. 1987. *Our Common Future: Report of the World Commission on Environment and Development*. World Vision 1987. http://conspect.nl/pdf/Our_Common_Future-Brundtland_Report_1987.pdf. Accessed May 2014.

Cote, C., and Moran, C. 2009. A water accounting framework for mining. In *The Australian Journal of Mining* (online). www.theajmonline.com.au/mining_news/news/2009/july-august/a-water-accounting-framework-for-mining. Accessed August 2013.

Fallon, E. 2009. Voluntarism versus regulation: Lessons from public disclosure of environmental performance information in Norwegian companies. *J. Account. Organ. Change* 5(4):472–489.

Gunningham, N., and Sinclair, D. 1998. Instruments for environmental protection. In *Smart Regulation: Designing Environmental Policy*. Oxford: Clarendon Press.

Gunningham, N., Grabosky, P., and Sinclair, D. 1998. *Smart Regulation: Designing Environmental Policy*. Oxford: Clarendon Press.

Gunningham, N., Kagan, R., and Thornton, D. 2002. Social licence and environment protection: Why businesses go beyond compliance. *29 Law & Soc. Inquiry 307*. University of California, Berkeley, Center for the Study of Law and Society Jurisprudence and Social Policy Program.

Hooke, M. 2012. Mining Regulation in Australia: An Opinion Piece by Mitch Hooke. www.minerals.org.au/news/mining_regulation_in_australia_an_opinion_piece_by_mitch_hooke. Accessed April 2014.

ICMM (International Council on Mining and Metals). 2003. ICMM Sustainable Development Framework: 10 Principles. London: ICMM. www.icmm.com/our-work/sustainable-development-framework/10-principles. Accessed August 2013.

ICMM (International Council on Mining and Metals). 2011. Partnerships for Development Toolkit. www.icmm.com/document/2607. Accessed April 2014.

ICMM (International Council on Mining and Metals). 2012. Community Development Toolkit. www.icmm.com/document/4080. Accessed April 2014.

ICMM (International Council on Mining and Metals). 2013a. *Approaches to Understanding Development Outcomes from Mining*. Social and Economic Development Report. London: ICMM.

ICMM (International Council on Mining and Metals). 2013b. *Community Health Programs in the Mining and Metals Industry.* London: ICMM.

Kemp, D., Owen, J.R., and van de Graaff, S. 2012. Corporate social responsibility, mining and "audit culture." *J. Clean. Prod*. 24:1–10.

May, P. 2003. Performance-based regulation and regulatory regimes: The saga of leaky buildings. *Law Policy* 25(4):381–401.

MCA (Minerals Council of Australia). 2005a. *Enduring Value: The Australian Minerals Industry Framework for Sustainable Development*. www.minerals.org.au/file_upload/files/resources/enduring_value/EV_SummaryBooklet_June2005.pdf. Accessed December 2013.

MCA (Minerals Council of Australia). 2005b. *Enduring Value: The Australian Minerals Industry Framework for Sustainable Development—Guidance for Implementation.* www.minerals.org.au/file_upload/files/resources/enduring_value/EV_GuidanceForImplementation_July2005.pdf. Accessed December 2013.

MCA (Minerals Council of Australia). 2009. *Memorandum of Understanding of Indigenous Employment and Enterprise Development Between the Australian Government and the Minerals Council of Australia*. www.minerals.org.au/file_upload/files/resources/mou/MoU_-_OK.PDF. Accessed May 2014.

MCA (Minerals Council of Australia). 2012a. Annual Report. www.minerals.org.au/news/2012_annual_report_minerals_council_of_australia. Accessed November 2013.

MCA (Minerals Council of Australia). 2012b. *Water Accounting Framework for the Minerals Industry: User Guide*. Version 1.2, April 2012. www.minerals.org.au/file_upload/files/resources/water_accounting/WAF_UserGuide_v1.2.pdf.

MCA (Minerals Council of Australia). 2013a. *Advancing Mining and Human Rights*. Press release. www.minerals.org.au/news/advancing_mining_and_human_rights. Accessed December 2013.

MCA (Minerals Council of Australia). 2013b. Sustainable development. www.minerals.org.au/focus/sustainable_development. Accessed August 2013.

MCA (Minerals Council of Australia). 2013c. Water accounting. www.minerals.org.au/focus/sustainable_development/water_accounting. Accessed August 2013.

MCA (Minerals Council of Australia). 2013d. Enduring Value: The Australian Minerals Industry Framework for Sustainable Development. www.minerals.org.au/focus/sustainable_development/enduring_value. Accessed October 2013.

MCA (Minerals Council of Australia). 2013e. About the MCA. www.minerals.org.au/corporate/about_the_mca. Accessed December 2013.

MCA (Minerals Council of Australia). 2013f. Water Accounting Framework. www.minerals.org.au/file_upload/files/resources/water_accounting/WAF_MCA_Member_Explanatory_Note.pdf

MCA (Minerals Council of Australia). August 2013g. MCA Member Companies. www.minerals.org.au/corporate/about_the_mca/mca_member_companies. Accessed December, 2103.

MCA (Minerals Council of Australia). 2013h. MCA Sustainable Development. www.minerals.org.au/focus/sustainable_development. Accessed December 2013.

Munro, V. 2013a. Stakeholder understanding of corporate social responsibility (CSR) in emerging markets with a focus on Middle East, Africa (MEA) and Asia. *J. Glob. Policy Gov*. 2(1):59–77.

Munro, V. 2013b. Stakeholder preferences for particular CSR activities and social initiatives to assist corporate strategy in emerging and frontier markets. *J. Corp. Citizen*. 51:59–77.

Newman, A., and Bach, D. 2004. Self-regulatory trajectories in the shadow of public power: Resolving digital dilemmas in Europe and the United States. *Gov. Int. J. Policy Admin. Inst*. 17(3):387–413.

Nilsen, H. 2010. CSR in banking—The Pursuit Toward Repairing Legitimacy and Reputation: A Case Study of Den Norske Bank and Danske Bank. Master's thesis, Copenhagen Business School.

O'Faircheallaigh, C. 2006. Aborigines, mining companies and the state in contemporary Australia: A new political economy or "business as usual"? *Aust. J. Polit. Sci*. 41(1):1–22.

O'Faircheallaigh, C., and Kelly, R. 2001. *Corporate Social Responsibility, Native Title and Agreement Making: Report to the Human Rights and Equal Opportunity Commission*. Brisbane: Griffith University.

OECD (Organisation for Economic Co-operation and Development). 1994. Meeting on alternatives to traditional regulation. Paris, May 1994.

Parker, C. 2008. The pluralisation of regulation. *Theor. Inq. Law* 9:349–369.

Pennington, L., and More, E. 2010. Sustainability reporting: Rhetoric versus reality? *Employ. Rel. Rec*. 10(1):24–39.

Perez, F., and Sanchez L.E. 2009. Assessing the evolution of sustainability reporting in the mining sector. *Environ. Manag.* 43:949–961.

Port Jackson Partners. 2012. *Regaining Our Competitive Edge in Minerals Resources*, Report commissioned by and prepared for the Minerals Council of Australia (September 2012), www.minerals.org.au/file_upload/files/presentations/mca_opportunity_at_risk_FINAL.pdf. Accessed August 2013.

Posner, R. 2007. *Evolution and Development of Self-Regulation*. New York: American Museum of Natural History.

Puplampu, B., and Dashwood, H. 2011. Organisational antecedents of a mining firm's efforts to reinvent its CSR: The case of Golden Star Resources in Ghana. *Bus. Soc. Rev.* 116(4):467–507.

Quek, M., and Sarker, T. 2011. Transnational corporations in the extractive industries operating in conflict states. *J. Corp. Citizen*. no. 44:29–44.

Rondinelli, D.A., and Berry, M.A. 2000. Environmental Citizenship in Multinational Corporations: Social Responsibility and Sustainable Development. *European Management Journal* 18(1):70–84.

Sarker, T. 2008. An empirical examination of factors influencing managers' environmental investment decisions in the Australian offshore petroleum industry. PhD thesis, Australian National University.

Sarker, T.K., and Burritt, R.L. 2005a. Does self-regulation improve corporate ecological-efficiency? An empirical investigation into the Australian Petroleum Industry from 1996 to 2002. *APPEA J.* 45(1):511–522.

Sarker, T.K., and Burritt, R.L. 2005b. Towards a Sustainable Business Strategy for Environmentally Sensitive Industries: The Case of the Offshore Oil and Gas Industry in Australia. 6th APRU Doctoral Students Conference. University of Oregon, USA. pp. 1–13.

Sarker, T., and Gotzmann, N. 2009. *A Comparative Analysis of Voluntary Codes of Conduct in the Australian Mineral and Petroleum Industries*. Centre for Social Responsibility in Mining, University of Queensland.

Schiavi, P. 2005. Regulating the Social and Environmental Performance of the Australian Minerals Industry: A Sociological Analysis of Emerging Forms of Governance. Regulatory Institutions Network Conference, ANU, Canberra.

Steinzor, R. 1998. Reinventing command and control regulation: The dangerous journey from command to self-control. *Harv. Environ. Law Rev.* 22:103–203.

University of Queensland. 2013. International Council on Mining and Metals—Review of social investments indicators for potential application in the mining industry. www.csrm.uq.edu.au/research/302-international-council-on-mining-and-metals-review-of-social-investments-indicators-for-potential-application-in-the-mining-industry. Accessed November 2013.

Utting, P. 2005. Corporate responsibility and the movement of business. *Devel. Prac.* 15(3-4):375–389.

Voluntary Principles on Security and Human Rights. 2011. The Principles: Introduction. www.voluntaryprinciples.org/principles/introduction. Accessed August 2012.

Webley, S. 2003. *Developing a Code of Business Ethics: A Guide to Best Practice, Including the IBE Illustrative Code of Business Ethics*. London Institute of Business Ethics.