The response of the Australian coal industry to the sustainable development agenda

Project Summary

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Centre for Social Responsibility in Mining
Background to the project

Over the last two decades, sustainable development has emerged as the key organising concept to describe how society can balance the objective of improving quality of life while staying within environmental boundaries. There are now an increasing number of reports produced by both global and national industry sectors, which aim to relate their activities to these goals. With these precedents in mind, ACARP Project C15026 has the objective of developing an approach to describe the response of the Australian coal industry to the sustainable development agenda. A key element of the project is to produce a framework that could be used to track how the response has and continues to change over time. Specific objectives outlined in the project proposal are as follows:

- To provide a defensible process for assessing the response to the sustainable development agenda of the Australian coal industry.
- To deliver examples of initial mapping of industry progress using this process.

The project was designed to avoid any significant demands on site operations, already required to submit extensive information to corporate reporting schemes. It was also recognised that any output should not ‘compete’ with existing reporting frameworks such as the Global Reporting Initiative. With this in mind, industry input was obtained via an industry workshop and individual interviews, with the rest of the information obtained via desktop research using public domain information.

The coal industry in Australia has attracted significant attention in recent years due to the exponential increase in public debate on climate change. In some quarters, the arguments on the role of the coal industry have been reduced to a ‘climate change vs. economy’ debate, i.e. contrasting the greenhouse emissions associated with the burning of coal for energy with the economic contribution of the industry both at national and regional levels. An important aspect of any framework is to move beyond this polarisation, and to facilitate a balanced assessment of all aspects of the sustainable development agenda.

Developing an approach and framework

A framework is a basic conceptual structure used to deal with complex issues. The complexity surrounding sustainable development is perhaps reflected in the number of competing frameworks used to try and make sense of, and respond to, the challenges it represents. Several competing SD frameworks have been proposed by various industry groups, non-governmental organisations and academics for use across a variety of contexts. These range from global measures of sustainability through to company-based SD approaches. The more popular frameworks include the following:

- Triple Bottom Line (TBL) approaches, which portray sustainable development as the intersection of the overlapping areas of economic, social and environmental concerns (e.g. the Global Reporting Initiative)
Five Capitals models, which aim to analyse sustainable development in terms of the stocks and flows of different types of capital, including natural and human capital.

Principles, Criteria and Indicator approaches, which aim to define a context-specific set of Principles, accompanied by more detailed criteria and indicators which allow progress towards sustainable development to be measured.

Issues-based approaches which avoid the question of the theoretical conceptualisation of sustainable development, instead focusing directly on a set of ‘issues’ which are deemed to represent the range of stakeholder concerns in this regard.

While the TBL approach has traditionally been the most popular framework adopted by individual companies for SD reporting, especially as the GRI has gathered more momentum, reports prepared at the sector level have tended to avoid this framework, and also the others described above, instead outlining a series of ‘Issues’ which the industry needs to focus on. Although some of the issues are common, for example climate change, others are more context-specific. Within the coal industry, previous work by the World Coal Institute has tended to be based around case-studies and specific issues. Individual company reports from the Australian coal sector have tended to be presented in TBL format, although it is noticeable that formats often change from year to year. There is partial adoption of the GRI format and set of indicators. At least one company has recently adopted an ‘Issues’ based structure.

One approach available to the project would have been to consider the current suite of GRI and other industry indicators, and simply to attempt to sum these to provide an overall number for the quantitative indicators. However, this was not done for several reasons: firstly, an objective was to avoid duplication or competition with existing initiatives; secondly, notwithstanding efforts by the GRI to standardise indicator definitions and reporting protocols, there are wide discrepancies in some areas e.g. water consumption; and finally, there would be large gaps in the data set as the industry is still quite selective in terms of GRI compliance. A further complicating factor is that some coal data is reported as part of larger corporate reporting initiatives and hence not easily separated.

Against this background, it was decided to avoid attempting to force selection of one of the specific approaches outlined above, but rather to adopt a ‘meta-framework’ which could accommodate any of them. This meta-framework was designed to provide a focus on industry activities, and to put more structure into the analysis. As mentioned, the aim of this project was not to devise yet another indicator set for implementation within the industry. Rather, the existing reporting process was assumed as part of the overall response, and was embedded into a larger meta-framework that includes drivers, policies, actions and activities, reporting, and outcomes (Figure 1).
The shaded area represents the industry response, encompassing both the Policies and Activities that companies develop and undertake both individually and collectively. However, for the context of understanding the response it is also useful to understand both the Drivers which influence the development of the response, and to consider the desired and actual Outcomes.

Assessing the response

The framework was tested by applying it to three specific issues\(^1\) – climate change, biodiversity and communities. Information was sourced via desktop research, accessing industry SD reports and other relevant information from organisations such as the Australian Coal Association and ACARP. Two specific time periods were chosen to develop a sense of the progression of the responses over time: the mid 1990’s, and 2005/6. The information sourced was collated into data sets, which were then used as the basis for a narrative description of each issue.

In each case, it is possible to observe significant changes in both the drivers of change and the response of the industry over the ten year period considered. In some areas the nature of the changes was quite similar for the three issues, for example:

- When considered as a whole, the drivers for change had strengthened considerably over the ten year period.
- There is evidence of a greater focus on developing collective industry policies and frameworks.

\(^1\) The first was selected because it offered a well-populated data set due to its current prominence in public and corporate debates. The latter two were selected by industry participants at the workshop,
• Individual company activities directed at improving performance can be seen to have increased markedly.

However, the nature of the changes can be quite different across the different issues. Some examples of the differences include the following:

• Legislative drivers are most established in the context of biodiversity, emerging for climate change, and weakest in the area of communities.

• Although legislative drivers for responding to climate change are not as strong yet as for environmental issues, company activities in the area of climate change are possibly the most developed, and include a number of collaborative approaches. This is less evident in the other two areas.

Applying a maturity framework

The use of maturity frameworks has been applied by several organisations as a means of self-assessing their response to health and safety as a key issue for the business. Although this approach originally emerged from the software development industry, the application to safety in the resources sector was pioneered by Shell with their ‘Hearts and Minds’ framework. The Mineral Industry Safety and Health Centre have used the same approach in their research, as have various mining companies including Anglo American and BHPB. The ‘meta-framework’ adopted for this project also offers the opportunity to investigate the maturity of the response to the full set of SD issues. To this end it was tested during the workshop with the issues of water and health and safety, with participants providing examples of Policies, Activities and Outcomes which they felt represented different levels of maturity. The output from this exercise provided a data set that confirmed the general sense that the response to the area of Health and Safety is at a more mature level overall than the area of water management. Building on the precedents from the Health and Safety area, it is possible to construct a generic framework that could be used to assess both individual company and collective industry responses to a full set of issues.

Conclusions

The adoption of the meta-framework allows the process to focus on specific issues, and is potentially an easier concept to communicate in terms of user understanding than some of the more complex sustainable development frameworks. Its use does not preclude the adoption of a TBL format, neither does the framework compete with the GRI. There are cases where the aggregation of relevant GRI indicators may be a suitable approach for the industry to take. However, the process also allows other possible metrics to emerge from the analysis. For example, the relationship between research funding into methane emissions and implementation of methane capture plants, as described in the climate change response narrative, provides a good example of a response to a significant component of direct greenhouse emissions from coal mines. This is one of several areas where it is possible to observe a progression from research into understanding the issues, through research into developing technologies to address the problem, through to implementation.
Although Outcomes feature in the framework, most of the focus of this exercise was on the Policy and Activities sections in terms of defining the industry response. Linking these to long term outcomes is an important but more difficult step. Safety provides a useful example: while reductions in overall injuries clearly remain the desired outcome, the industry has focussed extensively on process indicators to manage and improve performance rather than the lag indicators embodied in typical fatality and LTIFR statistics. Finding the right balance of indicators to monitor and communicate change is a challenge.

Although changes in the general state of different drivers were explored for each of the issues analysed, no systematic attempt was made to connect them to individual activities within the narrative descriptions. Work was undertaken during the project to explore this area, and discussed and tested in the final section of the workshop. For each driver, a simple rating scale was devised to allow identification of the extent to which it could be judged to have contributed to a decision on whether to proceed with a specific action or activity. This approach was modelled on the scales used for qualitative risk assessment processes. The use of these scales was tested during the industry workshop on several examples of specific initiatives, and the group as a whole was comfortable in assigning ratings to link the strength of each of the drivers to specific activities. The use of this type of analysis could potentially be used to further differentiate responses to different issues. If sufficient information was available on older initiatives, it is likely to also show a trend to a more complex mix of drivers over time. At the same time, the approach could be used to establish ‘a priori’ rationales for new projects.

A generic maturity model can be fitted to most of the issues. This could be a useful tool for individual companies to use for internal assessments and benchmarking processes, as per Shell’s ‘Hearts and Minds’ program. The application to the industry as a whole is more challenging due to the inevitable range of performance across different companies. If such an assessment was required, it would need to capture this range in some form.

In summary, the framework was successfully applied to three issues, and allowed changes in different elements over time to be assessed and compared. Further development of the approach would allow the maturity model to be incorporated into the meta-framework, as well as more detailed analysis of the links between the range of drivers and specific activities.