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# Coal Industry Advisory Board



**A Survey of CIAB Members on  
Coal and Sustainable Development**

**Volume 1**

**October 2002**

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## Summary

The Coal Industry Advisory Board surveyed its Members regarding attitudes to sustainable development and their organisations' activities relating to coal and sustainable development. The purpose was to ascertain the degree of practical expression being given to sustainable development - the subject of previous work by the CIAB.

The questionnaire sought the following information.

- The nature of the respondent's organisation;
- The perceived importance and degree of acceptance of the principles of sustainable development within the Member's organisation;
- The Member's views on sustainable development priorities for the coal industry and
- Examples of sustainable development activities.

This report has two volumes:

- Volume 1 reports, analyses and comments on the responses received.
- Volume 2 presents the full text of descriptions of sustainable development activities provided by Members' organisations.

Twenty-nine responses were received, a response rate of 73%. Electricity generators and coal producers were about equally represented and there were four responses from organisations involved in the coal industry in other ways.

Eleven responses were from multi-national organisations; three from organisations operating in developing economies and fifteen were from organisations operating in developed economies.

Eleven responses related to Europe, eight related to multi-regional activities; there were four from each of North America and Asia-Pacific and two others.

Responses indicated that in general, sustainable development was considered an important element in decision-making, with 83% of responses saying it was "very important" and a further 14% considering it "somewhat important". There were no obvious differences according to organisational activity and regional focus. Supplementary comments supported this view although a minority commented that in a competitive industry economic considerations prevailed.

Ninety percent of respondents said that acceptance of sustainable development principles was now more important or much more important than three years ago. Significant differences depending on organisational activity and regional focus were not evident.

Responses indicated a wide acceptance of sustainable development principles, although one that was greatest in senior management and above, with lower acceptance amongst other employees.

Eighty six percent of responses indicated that "some" or "much" commercial advantage could be gained by applying the principles of sustainable development. Only one respondent saw no potential for commercial advantage. Organisations operating in the Asia-Pacific region recorded the highest proportion of "much advantage" responses. All responses indicating "no" or "little" commercial advantage were from Europe, which recorded the lowest proportion of "much" advantage (30%).

Respondents were asked to rate twelve actions as to their importance to companies operating throughout the coal chain. There was widespread support for the majority of the suggested actions within a context of providing secure and low cost energy supply. The suggested action of "Doing nothing differently" was the lowest priority overall and in each sub-category by a large margin. The four highest overall ranked actions were:

- "Take actions to reduce the environmental impacts of coal production and use."

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- “Provide a secure source of energy supply.”
  - “Develop and use new technologies that reduce the greenhouse gas and other emissions from coal production and use.”
  - “Provide low cost energy.”

Some regional differences in priorities were noted:

- While 86% of respondents reported that the principles of sustainable development were “somewhat important” or “very important” in decision making in their organisation, the action of “Adopt and endorse sustainable development principles in organisations operating in the coal industry” ranked sixth overall, behind more specific actions. North American respondents ranked this action second, while respondents from the Asia-Pacific region ranked it tenth.
- “Establish improved ways for engaging stakeholders” was ranked tenth overall. North American respondents ranked it third while respondents from Asia-Pacific ranked it eleventh.
- Respondents described up to four activities that their organisation had undertaken or is undertaking to improve the sustainable development performance of coal. The most frequently mentioned activity was air emissions reduction, followed closely by research and development. The next frequently mentioned activities were energy efficiency improvement, public policy advocacy, stakeholder programs and health safety and environment activities. There were very few mentions of emissions trading and CDM/JI activities.

An overall assessment of the responses is instructive - while the organisations that participate in the CIAB are not representative of the global coal industry, the survey does give an insight into attitudes and practices within the coal industry in IEA Member countries.

Clearly a large majority of respondents recognise the importance of sustainable development and its increasing influence on decision making within the coal industry in recent years. Also, the responses showed that a lot of work is being done to improve the performance of the coal industry. Yet there was a wide range in the extent of activities and in some cases these did not reflect the stated recognition of the importance of sustainable development.

At one extreme were responses that indicated that changes in current practices were not necessary or that economic imperatives prevailed. At another extreme were organisations that had embarked on broad initiatives to better align their practices to sustainable development priorities. Most responses were between these positions.

The range of responses reflected the customary evolutionary process – one that commences with a sole internal focus on economic priorities for the business and then broadens to include local environmental issues and the community. Leading organisations are now moving to look at more global issues, to recognise and share the responsibility for the social and environmental impacts of using their products (including waste disposal) and to look outwards to engage stakeholders.

The survey responses show that overall there has been considerable movement from considering economic issues in isolation, with high recognition of operational environmental issues. While there were some specific examples, there was no evidence of consistent, industry-wide activity on the following areas:

- Social issues,
- Product issues,
- Global issues,
- The integration of social, economic and environmental considerations,
- Governance, and
- Stakeholder engagement.

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In an industry that does not enjoy a good reputation, stakeholder engagement activities and collaboration throughout the coal chain were given relatively low priority, consistent with an industry still developing its approach to sustainable development.

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## **Introduction**

The CIAB considered the role of coal in sustainable development in 2000 and 2001. A CIAB position paper prepared for the World Summit on Sustainable Development in Johannesburg, August 2002 summarised the findings of this work.<sup>1</sup>

In 2002 the CIAB conducted a survey of the positions of its Members and their organisations' activities relating to coal and sustainable development. The purpose was to ascertain the degree of practical expression being given to sustainable development.

This report has two volumes.

- Volume 1 reports, analyses and comments on the responses received.
- Volume 2 presents the full text of descriptions of sustainable development activities provided by Members' organisations.

## **Process**

A brief questionnaire was developed by CIAB associates and circulated to all CIAB members in early June. CIAB associates considered interim results in Washington DC in early July 2002 before further responses were received and the final analysis completed.

## **The Questionnaire**

The questionnaire, which is included in Volume 2 of this report, sought information in the following areas:

- The nature of the respondent's organisation;
- The perceived importance and degree of acceptance of the principles of sustainable development within the Member's organisation;
- The Member's views on sustainable development priorities for the coal industry and
- Examples of sustainable development activities.

Respondents were informed that individual responses would not be identified the first three sections. These results were reported in aggregated form, with some selected comments quoted. Organisations that elected to be named in their response to Section 4 have been identified.

Twenty-nine CIAB Members completed the survey: a 73% response rate.

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<sup>1</sup> "Coal and Sustainable Development – achieving balance in priorities" July 2002  
A position paper by the Coal Industry Advisory board prepared for the World Summit on sustainable Development Johannesburg, August 2002.

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## **Section 1: General Information**

This section asked for information about the Member's organisation.

### **Question 1.1: Involvement in the Coal Industry**

The primary activity of the respondents' organisations is summarised below. Coal producers and electricity generators were equally represented and there were four responses from organisations involved in the coal industry in other ways.<sup>2</sup>

<b>Coal Production</b>	<b>Electricity Generation</b>	<b>Other</b>
13	12	4

### **Question 1.2: Organisational Scope**

Most organisations operated in developed economies or internationally  
Eleven operated internationally  
Three were domestic organisations operating in a developing economy  
Fifteen were domestic organisation operating in developed economies

<b>Multinational</b>	<b>Developing</b>	<b>Developed</b>
11	3	15

### **Question 1.3: Regional Focus**

Europe was mentioned most frequently as the focus of operations, followed by multi-regional focus.<sup>3</sup>

<b>Multi-regional</b>	<b>Asia-Pacific</b>	<b>Europe</b>	<b>North America</b>	<b>Other</b>
8	4	11	4	2

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<sup>2</sup> Confirmation and consolidation of organisations' primary activities were undertaken to simplify analysis.

<sup>3</sup> Confirmation and consolidation of the regional focus of organisations was undertaken after the survey returns were received to simplify analysis.

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## **Section 2: Sustainable Development Acceptance and Importance**

This section asked for information about the perceived importance and degree of acceptance of the principles of sustainable development within the Member's organisation.

### **Question 2.1 Importance of Sustainable Development Principles in Decision Making**

Responses confirmed that sustainable development was an important element in decision-making, with 83% of responses saying it was "very important" and a further 14% considering it "somewhat important". There were no obvious differences according to organisational activity and regional focus.

		Not at all Important	Somewhat Important	Very Important
<b>Company Type</b>	<b>Producers</b>	1	2	10
	<b>Generators</b>		2	10
	<b>Other</b>		0	4
<b>Operational scope</b>	<b>Developed</b>	1	1	13
	<b>Developing</b>		1	2
	<b>Multinational</b>		2	9
<b>Regional interest</b>	<b>Asia-Pacific</b>		0	4
	<b>Europe</b>	1	1	9
	<b>Nth America</b>		0	4
	<b>Other</b>		1	1
	<b>Multi-regional</b>		2	6

Selected comments by respondents follow:

*"We believe that our long-term success depends on achieving excellence in three distinct areas: environment, safety and return to shareholders. Any coal company that does not earn and keep the public's trust will struggle to acquire new permits, attract high-quality employees, work successfully with the regulatory community, and achieve excellence in other areas of performance such as cost control."*

*"The principles, if applied correctly, are good business practice and necessary to sustain the coal business and its acceptability by the public over the long term."*

*"Sustainable development is seen as an integral part of our business approach and as contributing to the triple bottom line."*

*"As the world is moving toward a sustainable development society, a financial performance of a company is seen only as part of the total assessment of that company. It is important that the three main aspects on sustainable society - financial, environment and society development - should be duly considered when any company takes decisions."*

*"The notion of sustainability is central to good and effective decision making. It is important because it addresses long-term concerns, for example security of supply, demand expectations, environmental and safety issues, and the recruitment and retention of skilled personnel. Such concerns ultimately sustain businesses and need to be reconciled with short term decisions, in particular 'quick fixes' that may not prove acceptable or affordable in the long term."*

*"The principles of sustainable development have grown in importance in the organisation, but many decisions are still made on the basis of reaching a solution within the short to medium term."*

*“It is widely understood by decision makers ...that the outlook especially for coal-based power generation will be determined to a large extent by the amount of attention paid also to ecological factors and by the growing concern for the environment in addition to economic and social considerations. Coal’s prospects in the power generation sector will depend enormously on the progress made in developing technical solutions for clean coal combustion – whose ultimate objective may well be the CO2-free coal-fired power station.”*

*“Identified as a key driver by Chairman and Board, and being driven throughout the organization as a key response required to improve the performance of the sector, and the company within the sector. Our SD program is part of organization wide effort, which is far reaching and comprehensive.”*

*“...Sustainable Development is the idea that humans pursue fair and just prosperities among all groups and generations while overcoming various constraints, specifically environmental problems, under a new economic and social system with the basis of resource and energy conservation. As a member of the energy industry, ... actively pushes forward with business policies aimed to materialize sustainable development.”*

*“Decision making is concerned with survival, not sustainability.”*

*“New investment decisions on electricity generation are based on price competitiveness, limited impact on environment bearing in mind the restrictions resulting from Kyoto commitments.”*

**Question 2.2: Changes in the Acceptance of Sustainable Development Principles over the past three years**

Ninety percent of respondents said that acceptance of sustainable development principles was now more important or much more important than three years ago. Significant differences depending on organisational activity and regional focus were not evident.

		No change	More important now	Much more important now
<b>Company Type</b>	<b>Producers</b>	2	7	4
	<b>Generators</b>	0	7	5
	<b>Other</b>	1	2	1
<b>Operational scope</b>	<b>Developed</b>	2	10	3
	<b>Developing</b>	1	1	1
	<b>Multinational</b>	0	5	6
<b>Regional interest</b>	<b>Asia-Pacific</b>	0	2	2
	<b>Europe</b>	0	7	4
	<b>Nth America</b>	2	1	1
	<b>Other</b>	1	1	0
	<b>Multi-regional</b>	0	5	3

Selected comments by respondents follow:

*“We have long been committed to the principles of sustainable development. However, that commitment has deepened in the past three years, and the importance of embracing such principles in order to achieve success has become even more apparent.”*

*“The profile of sustainable development has grown significantly within the company, assisted in particular by:*

- a commitment to have new HSEC policies and procedures in place... and encompassing a much broader range of operational types and locations, in developed and developing countries,...*

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- *the international focus on sustainable development issues underlined by the approaching world summit (WSSD) in South Africa, international commitments to greenhouse gas emissions targets and changing community expectations;*
  - *the company's commitment to, and active, participation in the GMI and WCI;*
  - *specific sustainable development challenges for the company's coal business such as*
    - *the impact of HIV/AIDS on our coal industry employees and their families and communities in South Africa;*
    - *injuries and fatalities in our coal mining operations that, despite improvements, remain unacceptably high;*
    - *growing concern about the contribution of CO2 emissions from fossil fuel use to the risk of climate change.*

*Such developments have underlined the increasingly close alignment of sustainable development goals with the company's long term business objectives."*

*"The increasing popularity of the sustainable development context has not led to significant changes in our operations because the existing practices are already strongly aligned with sustainability. If anything, the popularity of sustainable development has provided coal mining with an opportunity to demonstrate to local communities and the general public the importance of carefully examining one-sided environmental proposals in terms of their economic and social impacts. In this regard, local communities in coal mining regions have learned to ask and demand answers to questions about economic costs and social (job) impacts for these proposals. Local communities have even made governments rescind proposals that had unacceptable social and economic costs. Sustainable development has had important influences on the public and their perceptions about balance between environment, economic and social factors and their willingness to actively intervene."*

*"The circumstances surrounding our company have been changed in many respects and we have been implementing activities emphasizing environmental initiatives. One of such initiatives is that we have decided to publish an annual Environment Report concerning activities of our group companies. The first Environment Report was issued in 2001. This is an evidence of acceptance of the importance of the sustainable development principles in our company."*

*"A formal statement of policy has been established."*

*"The principles have grown in importance for a number of externally driven reasons including the growth in socially responsible investment, new legislation and governmental policy, new standards for businesses (ISO 14001, AA1000 etc), more business-targeted activism, and greater exposure via the internet. All have driven the business to consider and develop its position in relation to corporate responsibility and sustainability."*

### **Question 2.3: Extent of Acceptance of Sustainable Development Principles within the Organisation**

Responses indicated a wide acceptance of sustainable development principles, although one that was greatest in senior management and above, with lower acceptance amongst other employees.<sup>4</sup>

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<sup>4</sup> Respondents nominated more than one category, hence the total exceeded the number of respondents.

		Board	Senior Managers	Operating personnel	All employees
<b>Company Type</b>	<b>Producers</b>	10	12	8	4
	<b>Generators</b>	7	10	6	4
	<b>Other</b>	3	3	1	0
<b>Operational scope</b>	<b>Developed</b>	9	11	6	6
	<b>Developing</b>	2	3	1	0
	<b>Multinational</b>	9	11	8	2
<b>Regional interest</b>	<b>Asia-Pacific</b>	3	3	2	1
	<b>Europe</b>	6	9	4	4
	<b>Nth America</b>	4	3	3	2
	<b>Other</b>	1	2	1	0
	<b>Multi-regional</b>	6	8	5	1

Selected comments follow:

*“They may not call the principles SD; however, all employees are active in the economic, social and environmental aspects of our business.”*

*“There is acceptance of the principles of sustainable development at the highest level. This has filtered down throughout the organisation, due to the implementation of policy, reporting and organisation wide communication.”*

*“Rather than “principles”, the “practices consistent with sustainable development” are widely accepted within our organization.”*

*“We believe that sustainable development concepts must be embraced at the top of the organization first. The use of our Code of Business Conduct and other governance principles ensures the concepts are followed elsewhere in the Company.”*

*“Senior management accept the principles, although their application is not yet central to decision making, which is still primarily driven by short-term commercial considerations. Few employees are aware of what ‘sustainable development’ means in principle or in practice unless they are directly involved in meeting the company’s obligations on sustainable development reporting. In reality, there is some limited acceptance/awareness at all levels in the company.”*

*“There is a high awareness of environmental issues and the company responds positively to these. In so far as environmental performance measures are used by government as indicators of sustainable development trends, there is an acceptance, but the wider principles of sustainable development are not explicitly considered or discussed.”*

#### **Question 2.4: Potential for Commercial Advantage from Applying Sustainable Development Principles**

Eighty six percent of responses indicated that “some” or “much” commercial advantage could be gained by applying the principles of sustainable development. Only one respondent saw no potential for commercial advantage.<sup>5</sup>

The group of organisations operating in the Asia-Pacific region recorded the highest proportion of “much advantage” responses (75% of region’s total compared to the overall proportion of 46%). All responses indicating “no” or “little” commercial advantage were from Europe, which recorded the lowest proportion of “much advantage (30%).

<sup>5</sup> One respondent did not offer an opinion and one responded “don’t know”.

		Commercial advantage			
		NONE	Little	Some	Much
Company Type	Producers	1	1	4	6
	Generators	0	1	5	6
	Other	0	0	2	1
Operational scope	Developed	1	2	6	4
	Developing	0	0	1	2
	Multinational	0	0	4	7
Regional interest	Asia-Pacific	0	0	1	3
	Europe	1	2	4	3
	Nth America	0	0	1	2
	Other	0	0	1	1
	Multi-regional	0	0	4	4

Selected comments by respondents follow:

*“Only those companies who demonstrate a concern for the environment, the communities in which they operate and the safety and wellbeing of their employees will be able to survive and prosper over the long run.”*

*“Incorporating sustainable development considerations in operational and planning decisions is increasingly seen as essential to staying competitive and creating lasting value within the company. Early mover advantages are available to companies that appreciate the significance of sustainable development and act and plan accordingly. Conversely, companies that fail to anticipate the implications for their future business environment risk falling behind and losing competitiveness and value. The growing significance of ethical share funds is an indication of how sustainable development is assuming increasing importance as a commercial objective, and the interests of shareholders and other stakeholders are becoming more closely aligned.”*

*“We believe the adoption of principles of sustainable development may affect the company financial performance. Better results are achieved avoiding opposition by local communities, attracting stakeholder and shareholders that are most sensitive on ethical and environmental issues, increasing operation efficiency.”*

*“By the implementation of sustainable development principles, risk is reduced, business and technical efficiency is improved, market share gained and reputation enhanced.”*

*“Sustainability is not an issue directly linked to commercial advantage. Sustainability for Canadian coal mines is instead directly related to the region where the mines are located. It involves the people who are connected to the coal chain, the businesses who depend economically on the coal industry and the local environment where potential effects would be experienced. Sustainable development provides a means of reducing the business risk to shareholders at operating coal mines. Mines need public sponsored approvals to operate and can often require public resources (land and minerals). Sustainability is more closely linked to the cost structure of coal mines and long-term competitiveness in the marketplace rather than any particular commercial advantage. The environmental and social dimensions of coal mining should not be manipulated as some kind of commercial marketing scheme. Sustainability addresses the potential risks faced by coal mining due to public perceptions and misconceptions within the jurisdictions governing the mining activity. In this regard, sustainability may be more a shareholder issue than a marketplace issue.”*

*“Proposed solutions and outlines for the implementation of EU-wide emission trading would result in unpredictable and unacceptably high risks. On the other hand if the other flexible elements (JI, CDM) can be used and EU-regulations take into consideration different climate*

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*conditions across the continent, some advantage could be gained. Also the usage of other energy sources than coal (e.g. nuclear, gas, wind, renewables) might bring some benefits.”*

*“We believe that stable supply of coal based on our company’s philosophy, customers-first-principles, contributes to sustainable development of both economies of a coal-producing country and our country, and that the societies give credibility to such contribution by such company’s performance. Implementing environmental initiatives further enhance our company’s credibility among the society and as a result we will be placed in an advantaged position in doing businesses.”*

*“Competitive positioning ahead of regulatory policy”*

*“There are many strategic gains to be made, particularly in securing future business and keeping ahead of some of our closest competitors. Applying the principles demonstrates that the company is a responsible forward-looking operator and enhances the brand. There are also wider benefits, for example in relation to transparency: improved stakeholder relations and a strong reputation and image (an increasingly important factor in attracting and retaining the best personnel).”*

*“Part of our approach is to identify what is the business advantage, although the prime motivation at this stage is overwhelmingly the need for the industry to address the emissions from coal in order to secure its place in the longer-term energy mix.”*

*“We already operate to the highest environmental standards.”*

*“Society in general, demands practices compatible with the environment, so it is beneficial for company image to follow them. On the other hand, clients are not ready to pay more yet for green electricity with lower environmental impact.”*

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### **Section 3: Sustainable Development Priorities for the Coal Industry**

This section asked for members' views on twelve suggested sustainable development priorities for organisations operating throughout the coal chain – such as mining, marketing, transport, consumption, waste management and by-products.

#### **Question 3.1: Rating of suggested actions for the coal industry**

The responses indicated widespread support for the majority of the suggested actions within a context of providing secure and low cost energy supply. The suggested action of “Doing nothing differently” was the lowest priority overall and in each sub-category by a large margin.

The responses are shown in the table 3.1, listed in order of decreasing average overall score and analysed by the sub-categories of organisational activity, operational scope and regional focus.

#### **Comments on the top four ranked actions**

The four highest overall ranked actions had an average score of more than 4.3 out of 5.0 and were common to all but three of the ten sub-categories' top ranked actions.

The four top ranked actions were:

- “Take actions to reduce the environmental impacts of coal production and use.”
- “Provide a secure source of energy supply.”
- “Develop and use new technologies that reduce the greenhouse gas and other emissions from coal production and use.”
- “Provide low cost energy.”

North American respondents placed two actions in their top four priorities that were not rated as highly by any other sub-category of respondents. There were:

- Rank 2: “Adopt and endorse sustainable development principles in organisations operating in the coal industry” (overall rank of 6).
- Rank 3: “Establish improved ways for engaging stakeholders” (overall rank 10).

Respondents operating in developing economies ranked “Adopt and endorse sustainable development principles in organisations operating in the coal industry” as the fourth priority (overall rank of 6).

Respondents operating in the “Other” regional interest category ranked third the action “Improve the health and safety performance of the coal industry” (overall rank of 5).

Notable variations within the responses by sub-categories were as follows.<sup>6</sup>

- Respondents from the Asia Pacific region ranked “Improve product stewardship throughout the coal chain” as seventh, whereas it ranked eleventh overall.
- Respondents from North America ranked “Provide a secure source of energy supply” as sixth, whereas it was ranked overall as second.
- Respondents from the “Other” region ranked “Develop and use new technologies that reduce greenhouse gas and other emissions from coal production and use” eighth, whereas this action was ranked third overall.

Other points of interest were as follows:

- While 86% of respondents reported that the principles of sustainable development were “somewhat important” or “very important” in decision making in their

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<sup>6</sup> An arbitrary selection criterion was used to select notable differences in sub-category scores. This was a difference in ranking of 4 or more places (compared to the overall ranking) combined with a score difference of more than two standard deviations.

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organisation (see Question 2.1), the action of “Adopt and endorse sustainable development principles in organisations operating in the coal industry” ranked sixth overall, behind more specific actions. North American respondents ranked this action second, while respondents from the Asia-Pacific region ranked it tenth<sup>7</sup>.

- An industry that is critically regarded by many stakeholders, ranked “Establish improved ways for engaging stakeholders” tenth overall with a score of 3.7 out of 5.0. North American respondents ranked it third while respondents from Asia-Pacific ranked it eleventh.

Some comments provided by respondents follow:

*“It would be good to provide with the product, “certificates” that show the application of good environmental practices on all the phases of production, transportation, storage, manipulation etc.”*

*“Sustainable development principles are needed to identify and priorities issues and guide actions.*

- *Reliable, low cost energy from coal has underpinned economic development and high living standards in developed countries, thereby helping to liberate them from the pursuit of basic needs and accord social and environmental issues the importance they deserve. For developing countries, affordable energy is a prerequisite for economic and social development and, therefore, for alleviating poverty and raising community health standards.*
- *Emissions of pollutants and CO<sub>2</sub> from coal use are the most important environmental issues facing coal, and major improvements in these areas could be achieved by transferring established developed-world combustion technologies to developing countries where coal consumption is forecast to grow strongly over at least the next 20 years.*
- *The key sustainability issues for coal - such as energy cost, emissions and technology transfer – are influenced by factors that range across the various stages in the coal chain. Communication/collaboration amongst producers, consumers, developers/financiers and plant and equipment makers is essential for understanding these issues and developing effective, coordinated responses.*
- *Establishing an accurate understanding of the environmental impacts of coal use and alternative fuels/inputs – based on impacts at every stage in the total product life-cycle rather than just the final act of consumption/combustion - is essential for balanced and effective energy policy-making.”*

*“The type of actions to reduce greenhouse gas emissions must also be linked to country specific issues, for example developing countries will taken action through the Clean Development Mechanism. Again economic considerations must play an important role.*

*Transfer of technologies must be needs driven and transfer can be south/south. Partnerships are critical for leveraging of resources and taking a holistic approach to product stewardship.”*

- *“Coal mines exist in a dynamic world that constantly changes. Continuous improvement is a necessity, not a luxury. However, this is not a justification for radical change but acceptance of measured change.*
- *As the old saying goes, “practice what you preach”. In this regard, principles are important to give direction, but practices are the fundamental building blocks to improve sustainability. If this point focused on practices, it would deserve a 10.*
- *Security of supply is one of the strengths of coal which needs to be continuously reinforced. It contributes directly to both the economic and social legs of sustainable development.*
- *Providing low cost energy also contributes strongly to the economic and social legs of sustainable development. By this means, coal also contributes indirectly to the*

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<sup>7</sup> The overall scores for actions ranked from seventh to eleventh were tightly grouped within a range of 13% and may not be significantly different.

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environment by helping to keep energy affordable which provides the economic strength to adopt high standards for environmental protection.

- This point states what should be obvious. Where there are known impacts, the coal industry should work diligently to reduce them and work toward eventual elimination if possible. This activity must be guided by science and economics to ensure that there are real benefits for resources used.
- Reducing emissions of all types as a consequence of deployment of better technologies remains a high priority but such technologies must demonstrate sustainability in terms of their economic and social implications. Technologies which deliver multiple benefits including cost reductions and improved productivities must be the main priority.
- The issue of technology transfer is complicated. The response to this point is based on an assumption that there are no real market barriers for developing country access to commercially available technologies other than those imposed by domestic regimes. The major issue for technology transfer would appear to be uptake rather than availability. As suggested by the CIAB's recent India report, government intervention into the marketplace and government ownership in key sectors forms the largest barriers to technology transfer. The issues faced by various sectors within developing countries (including the coal industry) are typically not unique; they have been faced and addressed in numerous developed countries, and the solutions are well-known and commercially available.
- This point has been taken to mean interaction between different links in the coal chain helping each other out with product stewardship. This action is lower in priority than others because each link in the coal chain is probably best positioned to deal with its specific issues. In some instances, there may be opportunities to share ideas or solutions. For example, coal mines can accommodate ash disposal for mine-mouth power plants.
- This action is once of high importance and refers to the value created by an organization like the CIAB which links all parts of the coal chain. It is important for each part of the coal industry to understand and accommodate the issues and priorities from other parts, and to seek joint solutions where feasible.
- Health and safety performance are very individualized elements of the coal industry. Collaboration on a local or regional basis can provide some opportunities for improvement but the greatest potential lies within organizations to improve through better practices and improved employee training, education and awareness. Many parts of the coal industry in many countries have strong health and safety performances. For example, Fording implements an incentive program in all its coal operations which includes safety performance as a one-third component to augment other programs for safety including employees own sense of health and well being. Experience has shown that when employees have multiple incentives to improve performance, they tend to do so efficiently.
- Engaging key stakeholders is a fundamentally important action for improving sustainable development in the coal industry, particularly those related to the economic and social dimensions of coal. It is vital that stakeholders realize the important value that the coal industry brings to them personally, and for their communities.
- It has been assumed that the term "market mechanisms" refers to taxes, tradable permits and other instruments created by government fiat. These are not appropriate vehicles for sustainable development as they tend to promote speculative behaviour and pit one industry against another in a game to seek government favour. The government should not be placed in a position to pick and choose environmental performance winners and losers based on arbitrary or politically motivated criteria."

"We believe each country must establish its own sustainable development policy. The general concepts of sustainable development are applicable worldwide; however, the specific courses of action must be established on a country-by-country basis."

"Key stakeholders to be engaged are the users of the product, particularly power utilities. Mechanisms for the improving the collaboration with utilities are not apparent, and the trends in the market towards short term contracts and spot transactions mitigate against the building of collaborative partnerships to address product stewardship."

**Table 3.1**

	Organisation Activity		Operational scope			Regional interest					Overall Average
	Coal Producer	Electricity Generator	Developed Economy	Developing Economy	Multi-national	Asia-Pacific	Europe	North America	Other Regions	Multi-regional	
<b>Q5. Reduce environmental impacts</b>	4.9	4.8	4.7	5.0	4.7	4.8	4.6	5.0	5.0	4.8	4.8
<b>Q3. Provide secure energy supply</b>	4.7	4.8	4.5	5.0	4.7	5.0	4.6	4.0	5.0	4.8	4.7
<b>Q6. Develop new technologies to reduce emissions</b>	4.6	4.8	4.7	4.3	4.8	5.0	4.6	4.5	4.0	4.9	4.6
<b>Q4. Provide low cost energy</b>	4.4	4.5	4.1	4.3	4.5	4.5	4.3	3.8	4.5	4.4	4.3
<b>Q10. Improve health and safety performance</b>	4.1	3.8	3.7	4.7	3.9	3.8	3.3	4.3	5.0	4.3	4.1
<b>Q2. Adopt and Endorse SD principles</b>	3.8	4.1	4.2	4.0	3.8	3.8	4.0	4.75	4.5	3.8	4.1
<b>Q7. Assist technology transfer to developing countries</b>	4.0	3.9	4.1	3.3	4.0	4.5	4.2	3.3	3.0	4.1	3.8
<b>Q9. Improve collaboration and communication in coal chain</b>	3.9	3.5	3.4	4.3	3.8	4.0	3.0	3.8	4.5	4.1	3.8
<b>Q12. Establish market mechanisms to reward improved environmental performance</b>	3.0	4.0	3.6	4.7	3.3	4.3	3.7	3.3	4.5	3.0	3.7
<b>Q11. Improved stakeholder engagement</b>	3.5	3.7	3.8	3.3	3.6	3.3	3.5	4.8	3.5	3.8	3.7
<b>Q8. Improved product stewardship</b>	3.5	3.1	3.1	3.7	3.3	4.3	2.7	3.0	3.5	3.4	3.3
<b>Q1. Do nothing differently</b>	0.6	0.7	0.7	0.7	0.7	1.3	0.8	0.5	0.5	0.5	0.7

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## **Section 4. Examples of Sustainable Development Initiatives**

The final section in the survey asked respondents to describe up to four activities that their organisation has undertaken or is undertaking to improve the sustainable development performance of coal.

Respondents were given the choice of having their organisation identified with their activities and about half agreed to be named.

A summary of the results, grouped under organisational activity and nineteen generic sustainable development groupings is shown in Tables 4.1, 4.2 and 4.3. This analysis records each mention of generic activities in the individual responses to Question 4.3.

The tables should be interpreted with the following in mind:

- The amount of detail in individual responses varied greatly and this influenced the number of scores entered in the tables.
- A degree of judgement was necessary to group the activities.
- Respondents were asked to report on only four main activities. While an organisation may have not mentioned an activity in its chosen list of four, this should not be interpreted that it is not active in this way. For example many well-established activities that are relevant to sustainable development may not have been novel enough to rate a mention.

### **Overall comments**

The most frequently mentioned activity was air emissions reduction, followed closely by research and development. The next frequently mentioned activities were energy efficiency improvement, public policy advocacy, stakeholder programs and health safety and environment activities. There were very few mentions of emissions trading and CDM/JI activities. Mentions of integration of the three pillars of sustainable development were few.

### **Coal Producer Comments**

Research and development and air emissions reductions were again the most frequently mentioned. Incorporating sustainable development principles (although mostly from one response), public policy advocacy, stakeholder programs, health safety and environment programs and land programs were next most frequently mentioned.

### **Electricity Generator Comments**

By far the most frequently mentioned activity was air emissions reduction, followed research and development. Responses from organisations engaged in other activities in the coal industry were more brief and contained fewer mentions of generic activities.

The full text of the activities described in the responses are presented in Volume 2, grouped by organisational activity and listed alphabetically.

**Table 4.1 Coal Producers**

PRODUCERS	Incorporating SD principles into business	Education & Awareness Programs	Public Policy Advocacy	Stakeholder Programs	Public Reporting	Participation in Government Initiatives	HSE Programs	R&D	Technology Transfer	CDM/JI Activities	Emissions Trading	Sequestration and storage	Land Programs	Efficient Coal Recovery	Alternate Fuels	Air emissions reduction	Energy Efficiency Improvement	By-product utilisation	Social and Community Programs	Total
Arch Coal Inc												2				2				4
BHP Billiton			1	1			1	1								1			2	7
Consol Energy						3		4								2		1		10
Fording Coal	1	1	1	1		1								1			1			7
Organisation B					1			2					2							5
Organisation F								3	2			1								6
Organisation K				1	1		1	1												4
Organisation L	1			1			1							1						4
Peabody Energy			2				1	1					1							5
RAG									2							2				4
Rio Tinto Energy	5	3	3	3	1	1	2	2					1			2	1			24
RWE Rheinbraun									1				1		1	1	1			5
UK Coal PLC						1	1	1			1		1			1				6
<b>Sub total</b>	<b>7</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>14</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>2</b>	<b>1</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>85</b>

**Table 4.2 Electricity Generators**

GENERATORS	Incorporating SD principles into business	Education & Awareness Programs	Public Policy Advocacy	Stakeholder Programs	Public Reporting	Participation in Government Initiatives	HSE Programs	R&D	Technology Transfer	CDM/JI Activities	Emissions Trading	Sequestration and storage	Land Programs	Efficient Coal Recovery	Alternate Fuels	Air emissions reduction	Energy Efficiency Improvement	By-product utilisation	Social and Community Programs	Total
Enel S.p.A					1						0				1	2	1			5
Eskom								1								1			2	4
KEPCO								1								2				3
Electric Power Development Co.			1					2	1	1		1				1	1			8
Helsinki Energy Board							1	2								2	2			7
Powergen UK plc				1			1	1								1	1	1		6
Organisation I					1		1	1							1	3				7
Organisation J																				0
Organisation M			1	1		1										1				4
An international independent power company	1	1					1												1	4
Organisation O				1				1	1			1								4
TEPCO															1	2	1			4
<b>Sub total</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>4</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>15</b>	<b>6</b>	<b>1</b>	<b>3</b>	<b>56</b>

**Table 4.3 Other Coal Industry Activities and Grand Total**

<b>OTHERS</b>	Incorporating SD principles into business	Education & Awareness Programs	Public Policy Advocacy	Stakeholder Programs	Public Reporting	Participation in Government Initiatives	HSE Programs	R&D	Technology Transfer	CDM/JI Activities	Emissions Trading	Sequestration and storage	Land Programs	Efficient Coal Recovery	Alternate Fuels	Air emissions reduction	Energy Efficiency Improvement	By-product utilisation	Social and Community Programs	Total
Norfolk Southern																				
Organisation A		1	1					1	1				1				1			6
Organisation C												1			1	2		1		5
Organisation H		1															1	1		3
<b>Sub total</b>																				0
	0	2	1	0	0	0	0	1	1	0	0	1	1	0	1	2	2	2	0	14
<b>GRAND TOTAL</b>	8	7	10	10	5	6	10	24	8	1	0	4	8	2	5	28	11	4	5	155