SUSTAINABILITY INDICATORS
& SUSTAINABILITY PERFORMANCE MANAGEMENT
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Director, Mining and Energy Research Network
Director, Corporate Citizenship Unit

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Mining and Energy Research Network

Promoting Corporate Citizenship and Sustainable Development

► Development & use of indicators

► Sustainability Performance Management Systems
  • Managing Sustainable Development Issues
  • Reporting on Sustainability Performance

► Tools

• Impact Assessment
• Social Accounting & Indicators
• Sustainability Reporting
• Auditing & Verification

• Partnerships
• Dialogue
• CSI
• Capacity Building
• Strategic Integration

► Policy, codes & standards provide reporting frameworks

► But... Corporate strategy & tailor-made approaches to SPMs & SIs support sound investment decisions
Corporate Citizenship Unit/MERN at WBS (5*)

- Collaborative programmes of network research & multidisciplinary projects - theory & practice
- Expanding PhD / Masters programme with industrial sponsorship & MBAs
- Short courses, TAGs, executive training
- Facilitation, coaching, mentoring, verification
- Case Studies
Corporate Citizenship: A New Paradigm

<table>
<thead>
<tr>
<th>OLD</th>
<th>NEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polluter pays</td>
<td>Pollution prevention</td>
</tr>
<tr>
<td>Regulation &amp; compliance</td>
<td>Rights and responsibilities</td>
</tr>
<tr>
<td>‘Do no harm’</td>
<td>‘Guarantee positive good’</td>
</tr>
<tr>
<td>Crisis-management</td>
<td>Precautionary approaches</td>
</tr>
<tr>
<td>PR</td>
<td>Social Reporting</td>
</tr>
<tr>
<td>Description</td>
<td>Indicators</td>
</tr>
<tr>
<td>Regulatory Drivers</td>
<td>Financial Drivers</td>
</tr>
<tr>
<td>Tangential</td>
<td>Strategic</td>
</tr>
</tbody>
</table>

Corporate Citizenship Unit
Three ‘capital’ components determine a nation’s wealth

New working definitions of sustainable development emphasise enhanced well-being over time - ‘development rights’ & QoL

Shifts attention from flow measures of economic activity (GNP)

Three implications for business & investors:
  • Business Practice
  • Equity
  • Product ‘Use’
From Rights To Responsibilities

- Gains emanating from the transformation of subsurface capital (e.g. minerals) contribute more positively to sustainable development.

- Pro-active interpretation of environmental & social responsibility beyond legal obligations to employees & shareholders.

- Products contribute to QoL & wellbeing.

- Sustainability Performance Management, Sustainability Indicators & Sustainability Reporting.
## Summary of Indicator Types

<table>
<thead>
<tr>
<th>Indicator Type</th>
<th>Overview</th>
<th>Environmental</th>
<th>Social</th>
<th>Economic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Descriptive</td>
<td>Relates to <em>drivers, pressure, state, impact, or response</em></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Performance</td>
<td>Compares the actual situation with targets</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Efficiency</td>
<td>Insights into efficiency of processes and product use</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Sustainable Reference Values</td>
<td>Relate to target levels of environmental quality from SD perspective</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Production</td>
<td>Standard engineering approaches to process management</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Regulatory</td>
<td>Regulatory indicators drawn from legal compliance</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Accounting</td>
<td>Accounting indicators for internal or external reporting and cost tracking</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Economic</td>
<td>Used to value external environmental &amp; social costs and promote internalization</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Quality</td>
<td>Quality-based indicators focused on waste minimisation</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Ecological</td>
<td>Local, regional, national &amp; international impacts on ecosystem health</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>
## Summary of Major Reporting/Indicator Initiatives

<table>
<thead>
<tr>
<th>NAME</th>
<th>Relevance to mining sector</th>
<th>Env.</th>
<th>Soc.</th>
<th>Eco.</th>
<th>Geographical relevance</th>
<th>Major users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Reporting Initiative</td>
<td>High</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Local → Global</td>
<td>All</td>
</tr>
<tr>
<td>MERN</td>
<td>High</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Local → Global</td>
<td>All</td>
</tr>
<tr>
<td>WBCSD</td>
<td>High</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Local → Global</td>
<td>Business</td>
</tr>
<tr>
<td>UNEP</td>
<td>High</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Local → Global</td>
<td>All</td>
</tr>
<tr>
<td>UN International Standards of Accounting &amp; Reporting</td>
<td>High</td>
<td>✗</td>
<td>✗</td>
<td>✓</td>
<td>Local → Global</td>
<td>Government, business</td>
</tr>
<tr>
<td>ISO</td>
<td>High</td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>Local → Global</td>
<td>Business</td>
</tr>
<tr>
<td>AccountAbility AA1000</td>
<td>High</td>
<td>✗</td>
<td>✓</td>
<td>✗</td>
<td>Local → Global</td>
<td>Government, business, civil society</td>
</tr>
<tr>
<td>Sectoral initiatives <em>medium (specific to sector)</em></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Mainly local and national, more limited at global level</td>
<td>Business (although reported to other stakeholder groups)</td>
<td></td>
</tr>
</tbody>
</table>
## Characterisation of Different Indicator Systems (Impacts)

<table>
<thead>
<tr>
<th>NAME</th>
<th>Application</th>
<th>Env.</th>
<th>Soc.</th>
<th>Eco.</th>
<th>Developer</th>
<th>Users</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPSIR Framework</td>
<td></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>OECD &amp; various</td>
<td>European Environment Agency Most nations reporting on the environment</td>
</tr>
<tr>
<td>Systems analysis view of the relationship between environmental system and the human system</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input-Output-Outcome-Impact</td>
<td></td>
<td>✓</td>
<td>✗</td>
<td>✗</td>
<td>World Bank</td>
<td>World Bank and related organisations</td>
</tr>
<tr>
<td>Project level framework</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability Performance Management System</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Mining and Energy Research Network</td>
<td>Companies, government, NGOs, local communities</td>
</tr>
<tr>
<td>Analytical structure for qualitative evaluation of performance &amp; logic for tracking change</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-house</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Various</td>
<td>Companies</td>
</tr>
<tr>
<td>Specific sites or companies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality of Life</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>Audit Commission (UK)</td>
<td>Local authorities (regional governmental bodies in the UK)</td>
</tr>
<tr>
<td>Informs community-based strategies to promote well-being</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Best Performance Value Indicators</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>DEFRA UK)</td>
<td>Local authorities (regional governmental in the UK)</td>
</tr>
<tr>
<td>Balances sustainability issues with cost of reporting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Direct and Indirect Effects from the Stakeholder Perspective (D. Mergler & MERN IDRC workshop, 1998)

STAKEHOLDER INDEX
- Mining Project
- Working community
- Local community
- Remote community
- National/international community

DIMENSIONS
- Human/Social Dimension
- Economic Dimension
- Bio-Geophysical Dimension

Project

Direct and Indirect Effects from the Stakeholder Perspective (D. Mergler & MERN IDRC workshop, 1998)
Indicators of Sustainability Performance

External/Internal Drivers
- Globalisation
- Voice of Society & Action Groups
- Regulatory Pressures
- Codes of Conduct
- Financial Drivers
- Supply Chain Pressures
- Peer Pressure
- Internal Pressure
- Reputational management
- Environmental Change

Technological & Managerial Frontier

A: Average
B: Bankrupt
C: Close-down/Clean up
D: Dynamic

External Social and Environmental Costs Per Unit of Output
Internal Production and Mitigation Costs Per Unit of Output
Sustainability Performance Management

- Impact assessment → Effects anticipated & prevented
- Partnership approaches to stakeholder relations
- Stakeholder dialogue
- Social Investment → Foundations & community projects
- Professional development and training
- Social accounting including indicators & target setting
- Reporting
- Auditing and verification/evaluation
Sustainability Performance Management & Strategic Management

- Integrate into mainstream corporate strategy
- Through coherent management framework
- Horizontally (CSR; HSE; HR; Financial etc.)
- Vertically (strategic)
Developing Sustainability Indicators for the UK Non-Ferrous Metals Industry

Professor Alyson Warhurst (Business Strategy)
Dr Paul Mitchell (Environmental Technology)
Dr Magnus Macfarlane (Social Auditing)
Nick Dale (Economist)
Deborah Webb (Environmental/social auditing)

University of Warwick
NFA
DTI
Aims of the Project

1. Develop a set of credible and meaningful indicators
2. Design a framework to evaluate progress against relevant milestones
3. Contribute to knowledge of the industry’s achievements, and the contributions that metals make to society
Outputs - Products of the Research

1. Indicators
   - Representative
   - Practical
   - Responsive to change
   - Contribute to prediction
   - Understandable
   - User-friendly
   - Relevant
   - Cost-efficient
   - Target-related
   - Comparable

2. Research analysis

3. Methodology
<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>Designed to show progress towards (or away from) sustainability</td>
</tr>
<tr>
<td>Sector/Large Business Units</td>
<td>Aggregated from Level III indicators</td>
</tr>
<tr>
<td>Company</td>
<td>Derived from Level III issues - applicable at company level</td>
</tr>
<tr>
<td>Company</td>
<td>Relates to issues at the level of the individual companies</td>
</tr>
<tr>
<td>Sector/Large Business Units</td>
<td>Relates to issues at the sector or large business unit level</td>
</tr>
<tr>
<td>Includes</td>
<td></td>
</tr>
<tr>
<td>Includes</td>
<td></td>
</tr>
</tbody>
</table>

- Level I Indicator
- Level II Indicator
- Level III Indicator
- Level II Issue
- Level III Issue
Groups of indicators

Environmental Sustainability
Natural resource protection (Level II)
Environmental strategy (Level II)
Management of local environmental impacts (Level II)

Economic Sustainability
Sustainable economic performance (Level II)
Economic impacts of the industry (Level II)
Employment impacts of the industry (Level II)

Social Sustainability
Internal stakeholder relations (Level II)
External stakeholder relations (Level II)
2 Research analysis

• Systematic description of issues
• Understanding stakeholder perceptions
• Dialogue
• Effective communication of progress
3 Methodology

- Stakeholder-scoped
- Expert derived
- Live, not static
- Adaptive
Future Work

- Ongoing dialogue
- Ongoing development of indicators & frameworks
- Further development of the product use methodology
- Priorities & phasing
- ‘Trade-offs’
- Enhancing participation
- Supply chain - upstream/downstream indicators
- Operationalising the indicator frameworks
- Scoring, auditing, reporting and verifying
- Communication
Social Performance Reporting

A case-study of the Social Accounting, Auditing & Verification process at Premier Oil
Premier Oil

➤ Small UK oil company

➤ Very successful in exploration

➤ 750 employees

➤ Indonesia, Pakistan, Myanmar

➤ Committed CEO and Management

➤ Under constant scrutiny regarding human rights
Indicator Development

- Suggests strategic options & targets
- Internal & collaborative learning process
- Evaluates & communicates performance
- Level playing field
Social Sustainability Performance Evaluation

Phase 1 (2000/1)
Methodology & Strategy
- Issues Scoping
- Stakeholder Consultation
  - Framework of Social Sustainability Indicators (SSIs)
  - Management Tools
  - Targets
  - Social Performance Management System

Phase 2 (2001)
Implementation
- Operationalisation of Management System
  - Management training
  - Application of management tools
- Stakeholder consultation & Social Accounting
  - Case studies to show achievement of targets

Phase 3 (2002)
Analysis & Reporting
- Internal Review
  - Social Reporting
  - External Audit, Verification & Evaluation
  - Setting of new targets
  - 2002 report & stakeholder consultations
Social Sustainability Dimensions

Level I (Global)
- Internal - employee
- External - civil society
- External - government

Level II (KPIs)

Level III (Local)
Function of the Framework

- Organised the social accounting process
- Defined systematic process for indicator development
- Categorised recommendations & targets
- Structured report & its verification & evaluation
Global Social Sustainability Goals (Level I)

→ Social justice in the workplace

→ Socially responsible external stakeholder relations

→ Socially responsible engagement with government stakeholders pertaining to regulation, human rights & corporate citizenship
Level I Internal CSR – social justice in the workplace

Level II Issues/ KPIs:

► Socially responsible...

... employment/ working conditions
... management policies/ systems
... employee development strategy
... communications & employee involvement
Social Performance Management Tools

- Level III activities & tools
- Pilot employee survey
- Survey for HR managers
- Survey at group level
- Audit & verification performance criteria

Targets
Embedding the Social Performance Management System

- Integrate with Strategic Management System
- Management Tools
- Regular Target Review
- Imaginative Training; Secondments & coaching
- Dialogue; Active Listening & Effective Communication
- Ongoing Engagement; Monitoring & Collaboration
- Team Performance Contracts
- Workplans
- Communications inc. innovative web-based tools
CASE STUDY
Audit & Verification/Evaluation

(I) Objectives

To audit the...

- Capacity: of the social accountants
- Process: of the social framework & account
- Findings: of the social account

As stated & good
Verification Methods

1. **Inspection**: examining documents, records etc

2. **Enquiry**: seeking to corroborate information

3. **Observation**: looking at a process being performed by others e.g. the observation of a focus group discussion
Evaluation Methods: Standards

Social Account Framework:
1. Identifying stakeholders
2. Defining and reviewing values
3. Identifying issues and indicators
4. Determining process scope
5. Selecting indicators
6. Embedding the process

Social Account:
7. Collecting information
8. Analysing information
9. Reporting information
Evaluation Methods: Principles

1. Inclusivity
2. Completeness
3. Materiality
4. Regularity and timeliness
5. Reliability
6. Accessibility
7. Embeddedness
8. Continuous improvement
Then the CCU Auditor produces a.....

Verification & Evaluation Statement
Sustainability Performance Management & Sound Investment Decisions

» Towards a social/ sustainability license to operate
» Public policy, international codes & standards provide a framework but reporting alone is no guarantee
» Corporate strategy - CSR - makes the difference & ...

effective management systems, pro-active capacity building and key sustainability performance management tools if all in place can promote and empower business to innovate & make that difference

Add Integration plus Leadership = Sound Investment Decision Making
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