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on International Investment

Foreign Direct Investment and the Environment
Lessons from the Mining Sector

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Investment in Mining in Asia
The Triple Bottom Line Challenge and Opportunity

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Economic Prosperity

- Low margin commodity business with little scope for higher value-adding product
- Downward price trend that encourages wasteful consumption in developed countries
- Poor financial performance (return on capital, profitability)
- Low price leading to industrial consolidation and scarcity of exploitable sites
Environmental Sustainability

- Significant ecological footprint of mining activities
- Operation in remote, fragile or stressed eco-systems
- Important solid waste generation creating irreversible environmental impacts
- Multiplicity of unreclaimed and despoiled sites
Social Equity

- Technology improvement and automation reducing local employment opportunities
- Subsistence mining under increasing economic and environmental pressure to close
- Legacy of mistrust between industry and local community
- Unfavourable image (dangerous, dirty, destructive) by public and media
Economic Prosperity

- Mined commodity plays an important role in human life quality and human prosperity
- Mining revenue can help local capacity building and industrial progress
- Mining activities to generate non-mining local employment opportunities
- Internalisation of environmental cost can lead to higher economic value of “sustainable” mining
Environmental Sustainability

- Conservation and restoration of the environment
- Improved health and safety for workers
- Technology innovation toward eco-efficiency
- “Green” intangible enhancement in company share value
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<th><strong>Social Equity</strong></th>
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<tr>
<td>➤ Promotion of social and community stability</td>
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<td>➤ Stimulation of stakeholder dialogue and participation</td>
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<td>➤ Education and capacity building at the local level</td>
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<td>➤ Improved governance and regulatory capability at the international, national and local level</td>
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<td>➤ Dissemination of Industry voluntary code of conducts, benchmarks and best practices.</td>
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Global Issues in Mining Investment (1)

Complex Sustainability issues
- Preservation of the options of future generations
- Promotion of social and community stability
- Conservation and restoration of the environment

Global Mining Governance Issues
- Legal and regulatory stability
- Efficient sector regulator
- Fair and competitive taxation
Mining Industry Specific Issues

- Public image of mining activities (exploration, mining, processing)

- Technical performance (geology, highest grade exploitable site identification, project evaluation and design, mine monitoring and management, R&D and innovation)

- Financial performance (commodity price, share price, ROI, agency rating)
Zinc Reserves

Ref: Crowson (2001)
Copper Mine Production & Price

Ref: Crowson (2001)
Industry Profitability Comparison - 1994

Ref: Standard & Poor Industry Reports April 1995
Annual Shareholder Returns

Ref: Data Stream World Extractive Industries Index
Sustainability in mining is not so much related to the exhaustion of natural resources. New exploitable resources continuously identified.

Sustainability in mining is more concerned with the need to contribute long term value and preserve options for the future.

Growing importance of “Env. / social accounting and longer term shareholder value creating” assessment of mining investment.
Key Weaknesses of Current Financial Accounting

- Inadequate coverage of financial corporate values (around 70% of the value of large public companies is captured as intangible: brand, reputation, values, innovative drive, business strategy, customer loyalty, employer satisfaction etc)

- Insufficient documentation of the external environmental/sustainability cost and liability of company activities

  Mining has low value intangible and high external environmental costs
Investing is to select among different investment alternatives the option most suited to create long term economic value/gain.

Estimating longer term economic value need to integrate all the potential costs (direct/indirect, internal/external, environment/social, liability, intangible etc.)

Neglecting environmental protection and social aspects have opportunity cost that can affect the ultimate economic gain of investment.
Shareholder value: discounted future free cash-flow less external capital

Scenarios driven shareholder value:

▶ Capital extensive env. management
▶ Product price and volume growth
▶ Production cost reduction
▶ Tax diminishing action

The When question however not fully addressed
Option value concept: When should an investment be made or how long should it be deferred to maximize long term shareholder value

Drivers of option value: risk, present attractiveness, deferment, cost of exercising, discount rate, opportunity cost

Scenario driven by option value:

➢ Secure new opportunity/provide security against risk over time
➢ Extended life of product and processes
➢ Efficiency enhancement along time line
➢ Optimisation of capital use over time
1. How to achieve above average price in the market? internalisation of environmental cost; improved quality and service value; innovative process technology

2. How to minimise process costs? high grade deposit; minimised social and environmental impacts; pollution prevention instead of control; improved energy efficiency

3. How to maximise volume of sale? stimulate local downstream industry; improved quality; foster efficient market mechanism; improved transport efficiency

Questions from Dr. F. Figge, CSM Lüneburg
4. How to minimise investment capital needs?
stimulate recycling and reuse; foster efficient market mechanism; high grade and exploitability deposit

5. How to maximise use of assets?
stimulate R&D and innovation for extraction; recovery of product in fines and mine-tailings

6. How to develop a competitive advantage difficult to imitate?
good local community relation and trust of stakeholders

Questions from Dr. F. Figge, CSM Lüneburg
7. How to enhance certainty in revenue, cost and investment impacts?
   respect environmental regulation; build good relation with local community; encourage internationally recognized governance rules and industry code of conduct

8. How to increase variable cost and cash outflow?
   externalise works and subcontract to local contractors and service providers

9. How to increase opportunity for new processes?
   stimulate technology R&D and innovation; further efficient market mechanism

Questions from Dr. F. Figge, CSM Lüneburg
10. How to prepare alternative to products that may lose value?
enhance mineral exploration and global geological knowledge; invest in recycling businesses; invest in substitution R&D and business development

11. How to enable optimally phased investment?
foster efficient market mechanisms; mining operation monitoring; environmental accounting

12. How to allow that no competitive advantage are lost?
foster governance rules and industry code of conduct; environmental management accounting

Questions from Dr. F. Figge, CSM Lüneburg
Unqualified shareholder primacy in corporate law (exp. Maine section 716 of Bus. Corp. Act: ....Directors shall exercise their power and discharge their duties with a view to the interests of the corporation and shareholders .....)

inhibit social responsibility: .... but not at the expenses of the environment, human right, the public safety, the communities in which the corporation operate or the dignity of its employees.
Enlightened Good Mining Practice for International Investors

Disclosure, Disclosure, Disclosure

1. Disclosure documenting that investment obeys all the laws

2. Disclosure of all environmental and social impacts and costs of investment

3. Disclosure of contribution to elective, administrative and regulatory public process

Corporate private right to operate and seek economic gains needs to be balanced by a public obligation to social capital beyond regulatory compliance
The Need for “Sustainable Investments (S.I.)” in the Asian Mining Industry

- Investor need to satisfy a triple bottom line
  - economic prosperity
  - environmental sustainability
  - social equity

- Enhancing productivity by reducing waste, inefficiency and risk

- Reaching out to a broader base of the Asian population by focusing on local people “essential” needs

- Avoiding the tragedy of the commons
The Difficulty of Defining S.I. Specifications and Standards

- essentially a perpetually evolving process rather than a set of fixed criteria
- country specific moving characteristics that depends on level of economic development, socio-cultural values and “sustainability” risks perceived by stakeholders
- preferably based on risk assessment and monitoring that integrate environmental, social and local community aspects and impacts
- need to engage stakeholders that have benefits and losses from these investments
The Value of Screening and Labelling S.I.

Financial Domain
➢ Better prospects of future profitability due to excellent fundamentals

Market Domain
➢ enhanced reputation and brand name with suppliers, consumers, clients and competitors

Public Domain
➢ improved licence to operate and attractiveness by local community, NGOs, media, pressure groups, employees, authorities etc.
Possible Activities of a Global S.I. Forum in Mining

- Forum for mining information and project exchange
- Think tank for S.I. criteria, risk assessment and innovative facilitating mechanisms
- Observatory of mining investments in Asia
- Training facility for S.I. development, management and governance best practices
- Support scheme for mining triple bottom line benchmarking
- Publisher of mining S.I. guide books and newsletters
1) Public authorities (Governance)

2) Finance and banks (Shareholder)

3) Industry (Leadership)

4) Civil society (Community)

5) Research and Academia (Innovation)
The Opportunity of a Global S.I. Forum in Mining for the Asian Region

- Leap-frogging Asian economic development through more efficient domestic and foreign direct investments
- Tackling Asian poverty
- Redressing past triple bottom line imbalance (economic profitability, environmental sustainability and social equity)
- Promoting multi-stakeholders dialogue and “border-crossing” knowledge exchange that are key to innovative, productive & sustainable solutions
The Value of a Global S.I. Forum in Mining for Investors

- Credible information that investors can interpret on the “sustainability” aspects of investments in Asia
- Better understanding of FDI risks, financial return and sustainability links
- Exploring new financing mechanisms for investment in Asia
- Higher returns and lower risks for investors
THANK YOU

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