Mining and Sustainability – Working Together

United Nations Commission on Sustainable Development
11 February 2010

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- BHP Billiton (Australia)
- Lihir Gold
- MMG
- African Rainbow Minerals (South Africa)
- AngloGold Ashanti
- Gold Fields
- Vale (Brazil)
- Xstrata (Switzerland)
- Barrick (Canada)
- Anglo American (United Kingdom)
- Goldcorp
- Teck
- Rio Tinto
- Mitsubishi Materials (Japan)
- Nippon Mining & Metals
- Sumitomo Metal Mining
- Freeport-McMoRan Copper & Gold (United States)
- Newmont

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ICMM member associations

**Americas**
Cámara Argentina de Empresarios Mineros
Cámara Asomineros Andi - Colombia
Cámara Minera de México
Cámara Minera de Venezuela
Consejo Minero de Chile A.G.
Instituto Brasileiro de Mineração - Brazil
National Mining Association - USA
Prospectors and Developers Association of Canada
Sociedad Nacional de Minería - Chile
Sociedad Nacional de Minería, Petróleo y Energía – Peru

**Asia-Pacific**
China International Mining Group
Federation of Indian Mineral Industries
Indonesian Mining Association
Japan Mining Industry Association
Minerals Council of Australia

**Commodity Associations**
Cobalt Development Institute
International Aluminium Institute
International Copper Association
International Lead Association
International Molybdenum Association
International Wrought Copper Council
International Zinc Association
Nickel Institute
World Coal Institute
World Gold Council

**Africa**
Chamber of Mines of South Africa
Mining Industry Associations of Southern Africa

**Europe**
Eurometaux
Euromines
Location of member operations

Over 500 sites in 59 countries
Interests important to mining

Industry: Mining companies (junior to major), investors, labour, service providers, associations

Government: Local, regional, national, international

Indigenous peoples and their organizations, mining affected communities

End users, original equipment manufacturers, consumers

Civil society organizations

Academic, learning, and R & D support
ICMM member commitments

10 Principles for Sustainable Development + 7 Position Statements

1. Implement ethical business practices and apply good corporate governance
2. Integrate SD in corporate decision-making
3. Uphold fundamental human rights
4. Manage risks based on sound science
5/6. Improve environment, health and safety performance continuously
7. Conserve biodiversity & conduct integrated land use planning
8. Apply materials and product stewardship
9. Contribute to community development
10. Publicly report, independently assure and engage openly and transparently

Mining and Protected Areas
Mining: Partnerships for Development
Climate Change
Mining and Indigenous Peoples
Mercury Risk Management
Transparency of Mineral Revenues
Mineral Resources and Economic Development
What does SD leadership look like?

**Leadership** means walking the talk: a public statement of SD commitments supported by actions that deliver on the public promise of the CEO.

**Leadership** means addressing both what is done (the substance) and how you do it (the process).
Mine project life cycle

1. Exploration
   - 1-10 years
   - Suspension Termination

2. Detailed site investigation, design and estimating
   - Typically 1-3 years
   - Suspension Termination

3. Construction

4. Operation
   - 2-100 years
   - Progressive rehabilitation

5. Final closure and decommissioning
   - 1-5 years

6. Post-closure
   - In perpetuity

Key:
- Mine life cycle 1960s
- Mine life cycle 1970s +
- Mine life cycle 2000
The metals and minerals life cycle

1. Exploration
2. Reserves
3. Mining and milling
4. Concentrate
5. Primary smelting and refining
6. Secondary smelting and refining
7. First products
8. Manufacturing
9. Consumer products
10. Wholesale and retail trade (Domestic and international)
11. End-uses
12. Recycle

African Rainbow Minerals
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Mitsubishi Materials

Mitsubishi Materials
Nippon Mining & Metals
Teck
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Xstrata

5. recycles old-scrap at a secondary smelter

1. recycles old-scrap in primary smelter

6. produce semi-fabricated products
2. produce consumer products
11. produce refined metals
Key Trends

1. Worldwide consumption of key mined commodities UP; demand in emerging economies UP

2. Increased role of developing regions in mineral production; growing role of mining in the developing countries’ economies; conflict in weak governance zones

3. Growing formal recognition that no one party can do it alone

4. Increased dependence on metals to support a shift to a low-carbon economy
The Challenge of Realizing the Resource Endowment

How do we create a set of arrangements governing mineral development that ensure:

1. Interests of “stakeholders” are considered and protected: communities; governments (local to national); companies (investors and employees); indigenous peoples?

2. a fair distribution in the benefits, costs, risks and responsibilities?

3. implications of the full life cycle are considered?

4. a capacity and process for adaptation in response to changing conditions?
ICMM Programs

1. Reporting & Assurance
   - Accountability & Continuous Learning

2. Socio-economic Contribution
   - Resource Endowment
   - Community

3. Environmental Contribution

4. Health & Safety
   - Worker
   - Community

5. Materials Stewardship

Mining and Metals Contribution

Core services

6. Communications

7. Strategy and Administration

Associations Co-ordination Group
ICMM Publications

- Planning for Integrated Mine Closure: Toolkit
- Good Practice Guidance on HIV/AIDS, Tuberculosis and Malaria
- Mining in Tanzania – What future can we expect?
- The Challenge of Mineral Wealth: using resource endowments to foster sustainable development
- Action for a Safer World

www.icmm.com
Tanzania – The Sharing of Mining Revenues

Estimated to total $25 billion - 1999-2034 from existing 6 mines.

<table>
<thead>
<tr>
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<th>%</th>
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<tbody>
<tr>
<td>Production costs</td>
<td>57%</td>
</tr>
<tr>
<td>Government taxes and royalties</td>
<td>15%</td>
</tr>
<tr>
<td>Shareholders</td>
<td>11%</td>
</tr>
<tr>
<td>Loans and interests</td>
<td>10%</td>
</tr>
<tr>
<td>Capital investment</td>
<td>7%</td>
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</tbody>
</table>
How big is mining’s macroeconomic contribution?

- Foreign Direct Investment: 60% - 90%
- Exports: 30% - 60%
- Government Revenue: 3% - 20%
- National Income (GDP & GNI): 3% - 10%
- Employment: 1% - 2%
Example: foreign direct investment, Tanzania

- **UNCTAD World Investment Report 2008** data tells us that:
  - Tanzania is now the leading non-oil destination for FDI in Africa after South Africa
  - FDI flows of $10 million or less per annum in the 1990s have grown FIFTY-FOLD to over $500 million per annum now!
  - In the 3 years to 2007 alone the total FDI was $1.7 billion
  - More than $2 billion of the $3 billion total FDI flows since 2000 are in the Mining Sector
Partnerships to enhance local content: The case of Chile

Direct, indirect and induced employment of Escondida

Source: Resource Endowment initiative, Chile case study, p.41
Mining can contribute to poverty reduction: the case of Chile

Chile: Falls in poverty by region, 1990-2003

Antofagasta: Chile’s core mining region
Ghana: macroeconomic performance


Introduction of new minerals code
Positive local socio-economic contributions

1. Since 1991 household-level poverty has declined substantially across Ghana.

2. Regions with high level of mining activity have lower absolute levels of poverty, and have experienced faster declines in poverty levels than other regions.

3. Households whose head is engaged in private sector employment are experiencing faster rates of poverty reduction than other sectors, especially traditional non-export agriculture.

4. The poorer northern regions (where mining activity is very limited) are lagging behind the rest of the country.
TANZANIA GDP: per capita growth (1950-2007)
Overall goal of ‘Mining: Partnerships for Development’

<table>
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<tr>
<th>Priority areas</th>
<th>Partnerships</th>
<th>Scope for many more partnerships under MPfD</th>
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<tbody>
<tr>
<td>1. Poverty reduction</td>
<td>Companies</td>
<td>Host Gov’t</td>
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<td></td>
<td>Donor Agency</td>
<td>Civil Society</td>
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<td>2. Revenue Management</td>
<td>Companies</td>
<td>Host Gov’t</td>
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<td></td>
<td>Donor Agency</td>
<td>Civil Society</td>
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<td>3. Regional Development</td>
<td>Companies</td>
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<td>Donor Agency</td>
<td>Civil Society</td>
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<td>4. Local Content</td>
<td>Companies</td>
<td>Host Gov’t</td>
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<tr>
<td></td>
<td>Donor Agency</td>
<td>Civil Society</td>
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<tr>
<td>5. Social Investment</td>
<td>Companies</td>
<td>Host Gov’t</td>
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<td></td>
<td>Donor Agency</td>
<td>Civil Society</td>
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<td>6. Dispute Resolution</td>
<td>Companies</td>
<td>Host Gov’t</td>
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<td>Donor Agency</td>
<td>Civil Society</td>
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**Goal of MPfD –**

To encourage a flourishing of multi-stakeholder partnerships to enhance mining’s socio-economic impacts across six priority areas.
Progress, Lessons and Future Directions

1. Reporting and Assurance
2. Overall contribution to human and ecosystem wellbeing
3. Fair distribution
4. Worker health and safety
5. Community health and well-being
6. Indigenous people
Progress, Lessons and Future Directions

7. Artisanal and small scale mining
8. Human rights
9. Climate change
10. Biodiversity
11. Integrated materials management
12. Post-closure implications
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