

# PECC MINERALS NETWORK

Stakeholders Scheme for  
Sustainable Development

Dr. Mike Katz,  
KCM International,  
School of Mining Engineering,  
UNSW, Sydney Australia

M.Katz@unsw.edu.au  
[www.mining.unsw.edu.au](http://www.mining.unsw.edu.au)

# **Stakeholders Scheme for Sustainable Development in Mining**

Mike Katz

KCM International, School of Mining Engineering,  
University of New South Wales, Sydney, NSW, Australia

## **Abstract**

Sustainable development issues in the mining cycle include mineral exploration and mining project development and environmental, economic and social impacts. These issues have been recently reviewed by a number of international programs in preparation for the 'World Summit on Sustainable Development' Human resource development (HRD) is most urgently required in many developing countries where sustainable mining is under the most economic and social stress. The mining stakeholders must take the lead in the transition to a more sustainable system in the minerals sector. Appropriate education and training programs would make an important contribution to building the capacity needed to make these systems work.

The concept of sustainable development in mining embodies two main ideas:

- the interplay of economic, social and ecological priorities
- the goal to develop and maintain long term objectives while undertaking short term development activities

The actors/stakeholders for sustainable development in mining include government, industry, unions, small scale miners, community and civil society, indigenous people, NGOs, development agencies, academia and other relevant associations and organisations. In all cases and on all levels there is a need for an educated awareness which require capacity building by on going HRD (human resource development) and learning to develop commitment and a common base of understanding. This is most urgently required in developing countries where there is a lack of sufficient human resources and institutional capacities. Essential stakeholder leadership can be strengthened by appropriate sustainable development HRD mining education and training programs.

The government is concerned with sustainable development as it is in their interests to attract mineral investment by promoting policies that best reflect the globalisation of this sector and help in the establishment of a healthy and prosperous mineral development community. For industry sustainable development initiatives are fundamental to protecting and advancing a company's essential corporate business interests. Unions, communities, indigenous people, NGOs and development agencies should welcome sustainable development for it is in their collective interest in improving mining company accountability and their performance in the areas of labour conditions, environmental protection, human rights, economic and social developments, and cultural rights and integrity. Academia also has an important role to play in providing the necessary education and training for sustainable development in mining (SDM). SDM is now of such importance that subject content should include ecological and social as well as

technical and management components. Future government and industry and union leaders must have a sound background in SDM and community, NGO, indigenous leaders as well as development advisers should be aware of SDM issues and systems. The reports, recommendations and course of action from the SDM initiatives also have to be incorporated in mining education and training planning and accreditation.

Appropriate programs have to be designed for the special needs of the various stakeholders. In regard to communities and indigenous peoples public awareness activities that deal with the mining impacts and benefits should be presented in a way that is understood. This may require special presentations in poster form for semi literate and illiterate folk in remote village areas. In rural communities and towns public meetings outlining the various stages of the mining operation and how the community fits in and benefits should be presented. In both cases a crash course in prospecting gives the people a sense of ownership and this could lead to cottage industry small scale mining. Government and industry employees should be made aware of their role in SDM in their workplace by seminars and workshops. Undergraduate geology, mining and metallurgy students should have relevant SDM in their curriculum starting from the first year. Post graduate students should be involved in research, case studies and SDM seminars as they are found in government regulations, industry applications and community consultations. On the mining professional technical, management and executive levels the education and training should take on a more formal professional development program by appropriate courses such as those developed in Australia.

## **STAKEHOLDERS SCHEME FOR SUSTAINABLE MINING**

<b>STAKEHOLDERS/ PARTNERS</b>	<b>ISSUES</b>	<b>EDUCATION &amp; TRAINING</b>
<b>Government</b>	<b>Policy &amp; Regulation</b>	<b>Professional Development</b>
<b>Industry/Company</b>	<b>Business &amp; Best Practice</b>	<b>Technical &amp; Professional Development</b>
<b>Unions</b>	<b>Labour Conditions</b>	<b>Management Relations</b>
<b>Small Scale /Artisanal Mining</b>	<b>Livelihood</b>	<b>Methods &amp; Business Transfer</b>
<b>Community/ Civil Society</b>	<b>Benefits, Impact &amp; Employment</b>	<b>Consultation &amp; Skills Transfer</b>
<b>Indigenous People</b>	<b>Impact, Benefits &amp; Employment</b>	<b>Negotiation &amp; Skills Transfer</b>
<b>Non Government Organisations NGOs</b>	<b>Monitoring/Facilitating</b>	<b>Mining Development Awareness</b>
<b>Funding and Development Agencies</b>	<b>Capacity Building and Institutional Strengthening</b>	<b>Awareness &amp; Development</b>
<b>Academia/ Colleges/ Schools</b>	<b>Education</b>	<b>Curriculum Development</b>
<b>Association/Organisations</b>	<b>Promotion/Publicity</b>	<b>Conferences, Seminars &amp; Workshops</b>

The concept of sustainable development in mining embodies two main ideas:

- the interplay of economic, social and ecological priorities
- the goal to develop and maintain long term objectives while undertaking short term development activities

# Global Mining Initiative (GMI)

- Mining, Minerals and Sustainable Development Project (MMSD)
- Resourcing the Future (Toronto 2002)

**World Mines Ministries  
Forum (WMMF)**

**Extractive Industries  
Review (EIR)**

**World Summit on  
Sustainable Development  
( WSSD )**

The KCM International (KCM I), which was the overseas development arm of the original KCM, is now the international section of the SOME promoting and developing international mining education, training and consultancy programs



# Mining Education and Training Projects

- Asia Pacific Region

Mineral exploration,  
Feasibility, Mine planning,  
Mine technology,  
Mine management,  
Mine environment

# SHORT COURSES

- Mining Processes and Systems
- Hazard Identification, Risk and Safety Management
- Technology Management in Mining
- Environmental Management
- Management of Innovation
- Managing Occupational Health and Safety
- Strategic People Management

## EDUCATION AND TRAINING FOR SUSTAINABLE DEVELOPMENT IN MINING

<b>STAKEHOLDERS/ PARTNERS</b>	<b>ISSUES</b>	<b>EDUCATION &amp; TRAINING</b>
Government/ Central or State	Policy & Regulation	Professional Development
Industry/Company	Business & Best Practice	Technical & Professional Development
Unions	Labour Conditions	Management Relations
Small Scale Mining/ Artisanal	Livelihood	Methods & Business Transfer
Community	Benefits, Impact & Employment	Consultation & Skills Transfer
Indigenous People	Impact, Benefits & Employment	Negotiation & Skills Transfer
Non Government Organisations NGOs	Monitoring/Facilitating	Mining Development Awareness
Funding and Development Agencies	Capacity Building & HRD	Awareness & Development
Academia/ Colleges/ Schools	Education	Curriculum Development
Associations/Organisations	Promotion/Publicity	Conferences, Seminars & Workshops