

IM4DC

Action Research Report

SUMMARY

Researchers:

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School/ Centre:

Mining Industry Safety and Health Centre, Centre for Water in the Mining Industry, International River Foundation, International Water Centre

University/ Institutions:

Sustainable Minerals Institute, The University of Queensland

Key themes:

Community and Environmental Sustainability

Key countries:

Mongolia, Philippines, Indonesia

Completion:

February 2013

Research aims:

Four objectives, in regard to the case studies used, guided this project:

- Evaluate the use of the term 'sustainability' in the context of mine water management
- Highlight current knowledge and recommend good practice models as a foundation to training and capacity building
- Adopt an integrated water management approach to evaluate the drivers of current practice
- Inform targeted IM4DC training programmes, including future research needs

For further information on this action research:

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Research paper: Bansuan AM, Goater SE, Danoucaras AN and Hearne D (2012). Integrated Sustainable Water Management in Mining for Development in the Philippines. *International Mine Management Conference, Melbourne, VIC*. Pp 205-226.
<http://www.ausimm.com.au/publications/epublication.aspx?ID=15447>

Integrated Sustainable Water Management in Mining for Development

This project used water management as a focal point to assess and reflect on the performance of sustainable mining across the Philippines, Indonesia and Mongolia. The desktop component identified an overall lack of sustainability reporting, communication and transparency, and concerns regarding land use, water resources and governance issues within each country. The case study workshops illustrated the value in seeking the viewpoints of multiple stakeholders to extrapolate local knowledge and insights on the realities and challenges of achieving sustainable mining in developing countries. The following common themes and potential IM4DC education and training opportunities were identified:

- Sustainable development (SD) as a response to industrialism should view economic growth, social equity and environmental protection as complementary; whereby the aim is to balance and soften conflicts arising from various interests. It is recommended IM4DC advocate that any SD or sustainable water management (SWM) related education and training initiatives adopt an integrated and collaborative process; as a catalyst for transition towards integrated practice.
- Current definitions of SD are broad and subject to varying interpretations. IM4DC can assist in the development of context specific definitions, to ensure key mechanisms for achieving SD and SWM are appropriate and effective.
- The legislative and policy frameworks in the three focal countries are limited, particularly in detail relating to SD and SWM concepts. A collaborative review of the national and provincial policy frameworks could provide clarity and alignment of regulatory and stakeholder responsibilities and accountabilities relating to SD and SWM. Opportunities for cohesion among large and small scale mining operations should be prioritised.
- A better understanding of the most effective ways to communicate past, existing and future SD and SWM initiatives is required to provide transparency and unity in SD direction. IM4DC driven participatory workshops with local, regional and national stakeholders to develop strategies for effective communication would be highly valuable.
- Community concerns relating to artisanal mine worker safety and general community health issues associated with watersheds are not captured in current SD and SWM reporting. Examples include risks to workers from strata falls caused by flooding, erosion and landslides; community health and sanitation issues resulting from limited access to water managed by larger mines; artisanal gold miners working with cyanide, releasing mercury into local water resources. A more holistic and integrated focus on community health and safety is needed, with particular emphasis on artisanal mining groups.

Established productive working relationships between the Sustainable Minerals Institute, International Water Centre and International Rivers Foundation provide momentum for the implementation of the proposed recommendations. Collectively, these organisations have shared interests in AusAID developmental goals and tailoring educational materials for capacity development in relation to mining and water.