

3rd International Conference on Sustainable
Development Indicators in the Minerals Industry

Panel II: Integrating Sustainability in Capacity Building

University Capacity Building

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Outline

- UN Decade of Education for Sustainable Development
- University courses on Mining and Sustainable Development
- What about the pre – and post - university experience?



UN Decade of Education for Sustainable Development

- In December 2002, the United Nations General Assembly adopted resolution 57/254 on the United Nations Decade of Education for Sustainable Development (2005-2014) and designated UNESCO as lead agency for the promotion of the Decade.

The overall goal of the DESD is to integrate the principles, values, and practices of sustainable development into all aspects of education and learning. This educational effort will encourage changes in behaviour that will create a more sustainable future in terms of environmental integrity, economic viability, and a just society for present and future generations.



UN Decade of Education for Sustainable Development – Australia as an Example

- Australian Government Implementation Strategy for the Decade of Education for Sustainable Development
 - Vision: At the end of the Decade the Australian community will have the understanding, knowledge, skills and capacity to contribute to sustainable development and will embrace the intrinsic value of sustainability as a national aspiration. Our ultimate vision is a sustainable Australia.
 - Caring for Our Future – the Australian Government Strategy for the DESD
 - A National Symposium on the United Nations Decade of Education for Sustainable Development (DESD), was held in Melbourne on 7 July 2005
 - <http://www.environment.gov.au/education/decade/index.html>



University Capacity Building on Mining and Sustainable Development

- Undergraduate approaches:
 - Courses (examples):
 - UNR since 2001: all undergraduate seniors must take the course
 - Seminar course at Colorado School of Mines
 - Modules for inclusion in whole curriculum
- Graduate approaches:
 - Graduate courses
 - Graduate certificates
 - Combinations of distance learning and personal contact
- Graduate Degrees in “Mining Engineering” limits the flexibility of faculty to accept graduate students without Mining Engineering background; a limitation to build capacity for industry needs
- Industrial Ecology is an essential course(s) for Engineering students as part of their Sustainable Development Curriculum



What About the Pre - and Post - University Experience?

- *An important distinction is the difference between education about sustainable development and education for sustainable development**
- Education directly affects sustainability plans in the following three areas: implementation, decision-making and quality of life
- Four priorities: improving basic education, reorienting existing education, public understanding and awareness, and training
- Registration of Sustainability Professionals (<http://www.sustainabilityprofessionals.org>)

*Sustainable Development Toolkit, by Rosalyn McKeown, Ph.D. with assistance from Charles Hopkins, Regina Rizzi, and Marianne Chrystalbridge, <http://www.esdtoolkit.org/>



Capacity Building Matrix

| Stakeholders | Capacity Building Approaches | Contents for Capacity Building | Measuring the Success of Capacity Building | Other Comments |
|---|------------------------------|--------------------------------|--|----------------|
| Mining company personnel at all levels | | | | |
| Mining communities | | | | |
| Professionals that practice in sustainability | | | | |
| Regulators | | | | |
| Local and regional officials | | | | |
| NGO's | | | | |
| Universities (faculty and students) | | | | |
| Mining Trade Associations | | | | |