

The logo for the Society of Mining Engineers and Geologists (SME) features the letters 'SME' in a bold, blue, sans-serif font. A yellow and green curved line sweeps under the letters from left to right.

Sustainability and Sustainable Development Practices in the Minerals Industry

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Sustainability and sustainable development are conceptual frameworks or systems for managing resources⁽¹⁾ to meet the needs of present as well as future generations.

(1) A resources is a source or supply from which a benefit is produced.

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Laurence, D.C. ,2011, "Establishing a Sustainable Mining Operation—
An Overview" Journal of Cleaner Production Vol. 19, Issue 2-3,
Jan/Feb 2011 Elsevier Science Ltd

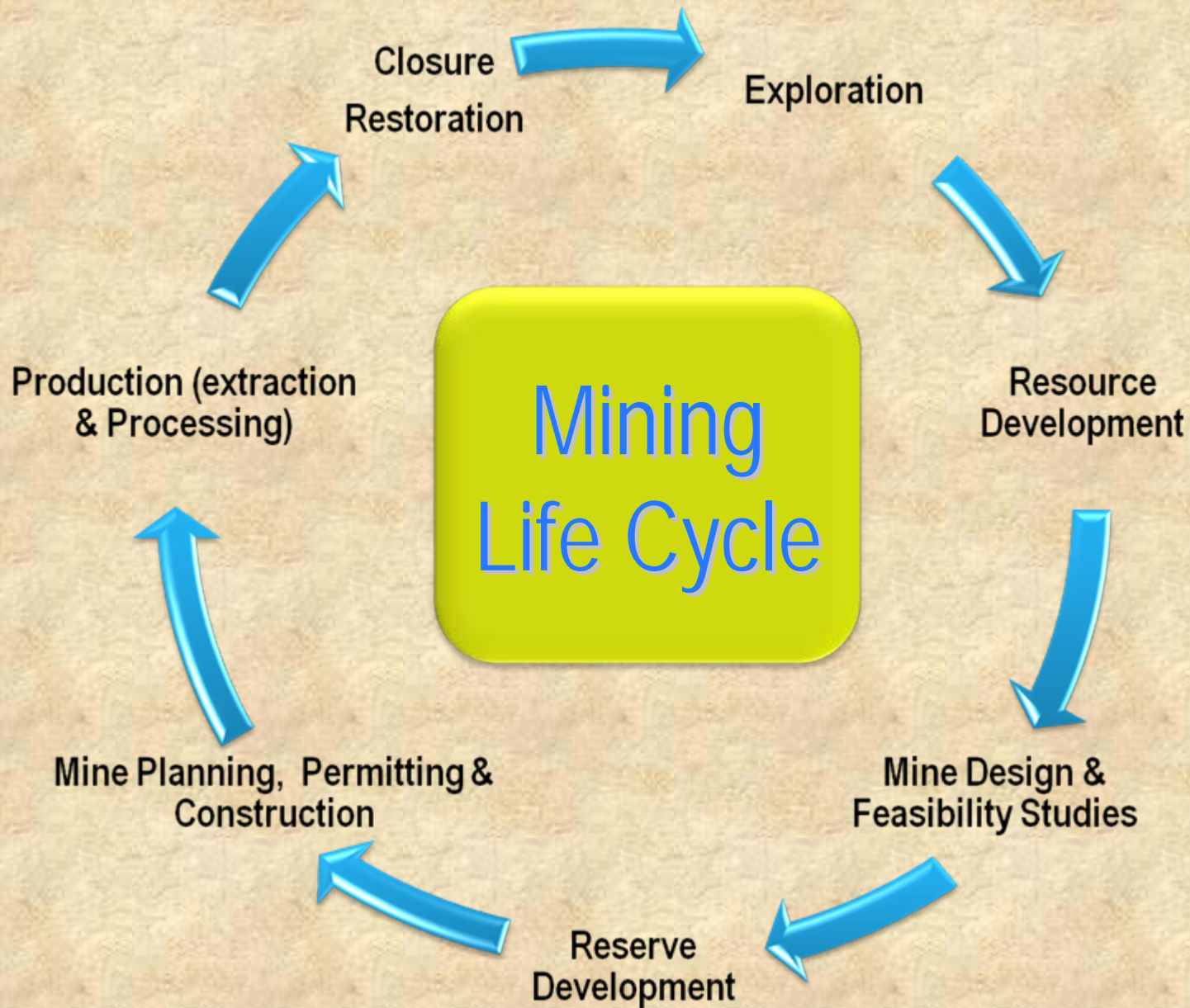
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How does this model apply to mining?

Mining contributes to SD by focusing on successful economic, environmental and social outcomes at all phases of the mining life cycle.



“Triple Bottom Line”



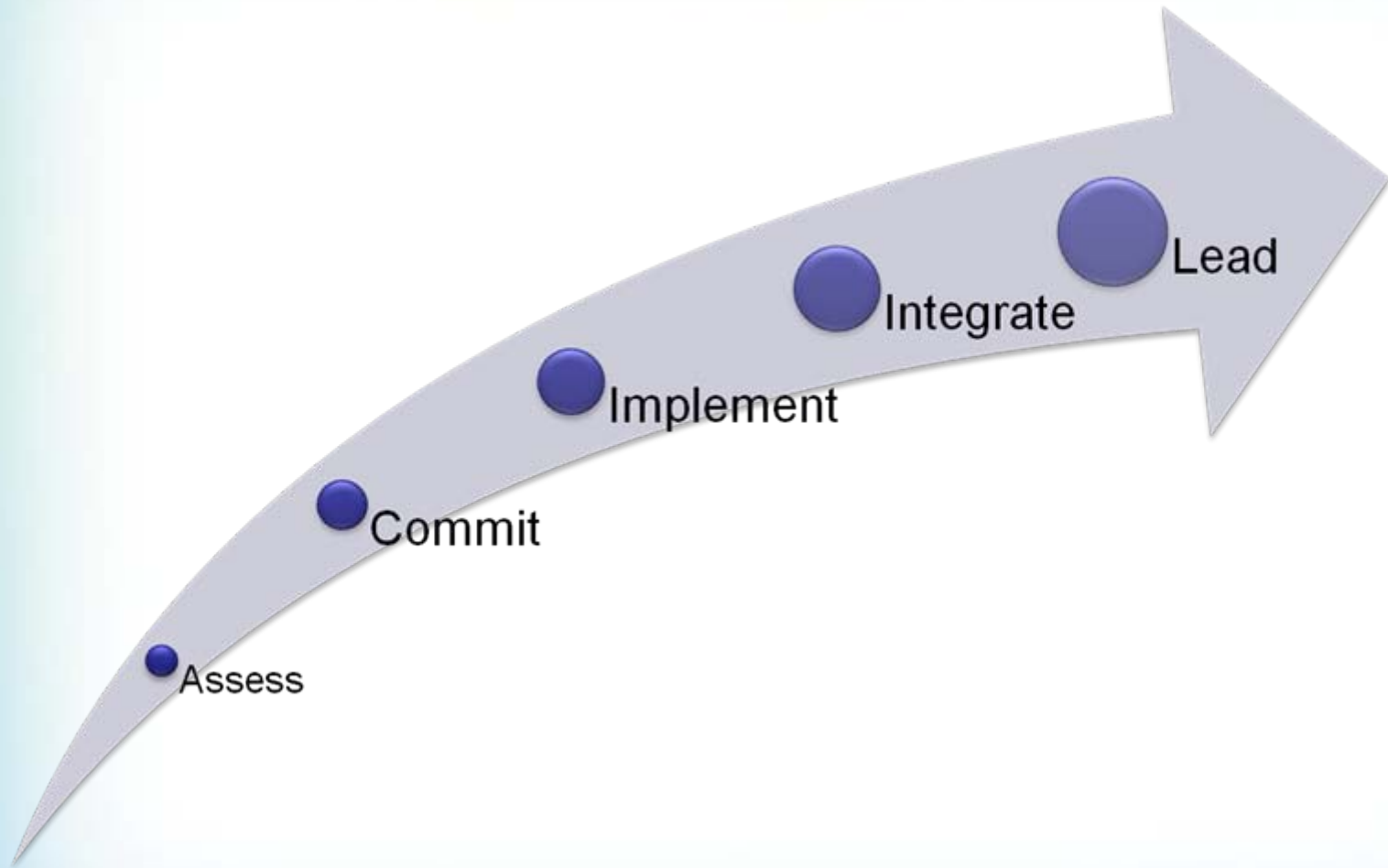


SD Goals for the Mining Industry

- Investments in mineral projects must be directed to those that are financially profitable, technically appropriate, environmentally sound and socially responsible.
- The concepts of sustainability and sustainable development must be integrated into strategic decision-making processes as well as day to day operations.
- Operation-level stewardship initiatives must be implemented as appropriate.

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Path to Sustainable Development



Website Survey of 33 Mining Companies

Programs by Mining Industry Sector (IM = Industrial Minerals, C = coal, M = metals)

Sector	# Websites	Sustainability	Sustainable Development	Public Reporting/Program/Commitment	CSR	OTHER
IM	15	47%	27%	60%	13%	87%
C	7	0%	0%	14%	43%	86%
M	11	73%	64%	91%	18%	100%

Programs by Company Size

Size	# Websites	Sustainability	Sustainable Development	Public Reporting/Program/Commitment	CSR	OTHER
L	17	59%	41%	88%	18%	100%
M	11	36%	36%	36%	36%	82%
S	5	20%	0%	20%	0%	80%

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From Opposition to Transformation

Opposition

? Lack of Knowledge

Transformation

“Simply a PR exercise with no tangible benefits.”

“Hurts profits.”

“Inhibits business growth.”

“Another tactic for controlling the industry.”

Improves profitability

Preserves social license to mine (social capital)

Creates mineral wealth in an economically efficient and responsible way.

Minimizes environmental impacts during operations (land, air, water, soil, wildlife habitat, energy).

Maintains or enhances the quality of the natural environment post closure.

Ensures a thriving and secure future for the mining industry

- Declining Ore Grades
- Increased waste rock
- Deeper deposits
- Mining in fragile environments (polar, desert, tropical, marine, extraterrestrial)
- Mining in remote regions
- More intensive processing (water, energy, chemicals)
- Increasingly restrictive environmental standards
 - Water
 - Carbon emissions
 - Energy
- Shrinking workforce

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