The Role of SRTI in the promotion of Clean Remediation Technology

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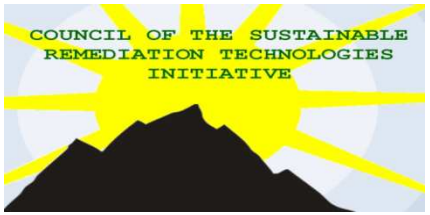

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Presentation Outline

- **Introduction**
- **Clean Remediation Promotion**
  - The Initial Model
  - The Stakeholders Assemblage
  - The Consultation Process
  - The First Draft Report
- **Our Challenges**
- **Conclusion**

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1. Introduction

1. 1 Environmental legacy of the last century

- Toxic waste sites, abandoned mines, contaminated military installations, leaking fuel storage depots, ar other hazards to human health and the environment (EC, 2009).
- The practices and activities of past years were consistent with the standards of the time and were carried out without full consideration of the environmental and health protection consequences they created (EC, 2009).
- The awakening of environmental consciousness over the last quarter century
  - Canadians awareness of the threats posed by contaminated sites
  - Cleaning up many of contaminated sites

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1. Introduction

- ***Characteristics of Conventional Remediation***
  - Transfer of contamination from one medium to another
  - Socio-cultural/recreation activities disruption
  - Resource consumption
  - Economic issue
  - Land value and land use impacts

- **Growing demand for clean technologies**
  - rising energy and water costs,
  - concerns with climate change, and
  - public demand for environmental protection
  - new developments in remediation technologies that will reduce environmental impact, use fewer resources, etc.

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What are the approaches to meeting these demands?

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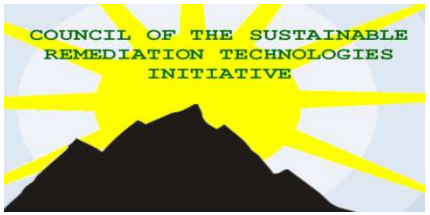
2. Promotion of Clean Remediation Technology

- Articulating criteria for evaluating clean remediation technology
- Developing clean remediation technology decision aid
- Developing clean remediation techniques
- Educating stakeholders on clean remediation



What is clean remediation technology?

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2. Promotion of Clean Remediation Technology

Green remediation is the remediation practice that considers all environmental effects of remedy implementation for contaminated sites and incorporates options to maximize the net environmental benefit of cleanup actions (USEPA, 2008).

Sustainable remediation is the remediation practice that considers technical, environmental, economic and socio-cultural impacts of contaminants removal, reduction or neutralization at every stage of the process and take actions that optimize the net benefit of a cleanup.

A sustainable remediation technique is the remediation technology or approach that optimizes the three sustainability objectives.

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What is SRTI doing to foster clean remediation?

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3. How SRTI is promoting clean remediation technology

- Development of:
  - criteria and indicators for sustainable remediation technology
  - decision aid for assessing the sustainability of currently used remediation techniques
- Educating stakeholders on sustainable remediation
- Researching sustainable remediation methods

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4. Our Activities and Achievements

- Initial conceptual decision model - October 2004

  - Hybridized fuzzy logic, SAW & Conjunctive method
  - Incorporating three dimensions of sustainability

  – *Needs and values of stakeholders,*

  – *Maintaining and enhancing quality of life and environment,*

  – *Stakeholders participation*

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4. Our Activities and Achievements

- Stakeholders' Assemblage - March 2005

The purpose :

- Encourage dialogue between stakeholders
- Identify types/set of indicators/information needed
- Highlight strategic trends and priorities
- Support an interim assessment of the progress toward sustainability goals as they relate to sustainability of remediation and of the remediation techniques
  - *Met monthly*
  - *Completed first report*

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4. Our Activities and Achievements

- *Organizations involved*
  - 11 Environmental consulting companies
  - 1 Member from a manufacturing company
  - 3 Members from Alberta Govt. Agencies
  - 1 Member from the City of Calgary

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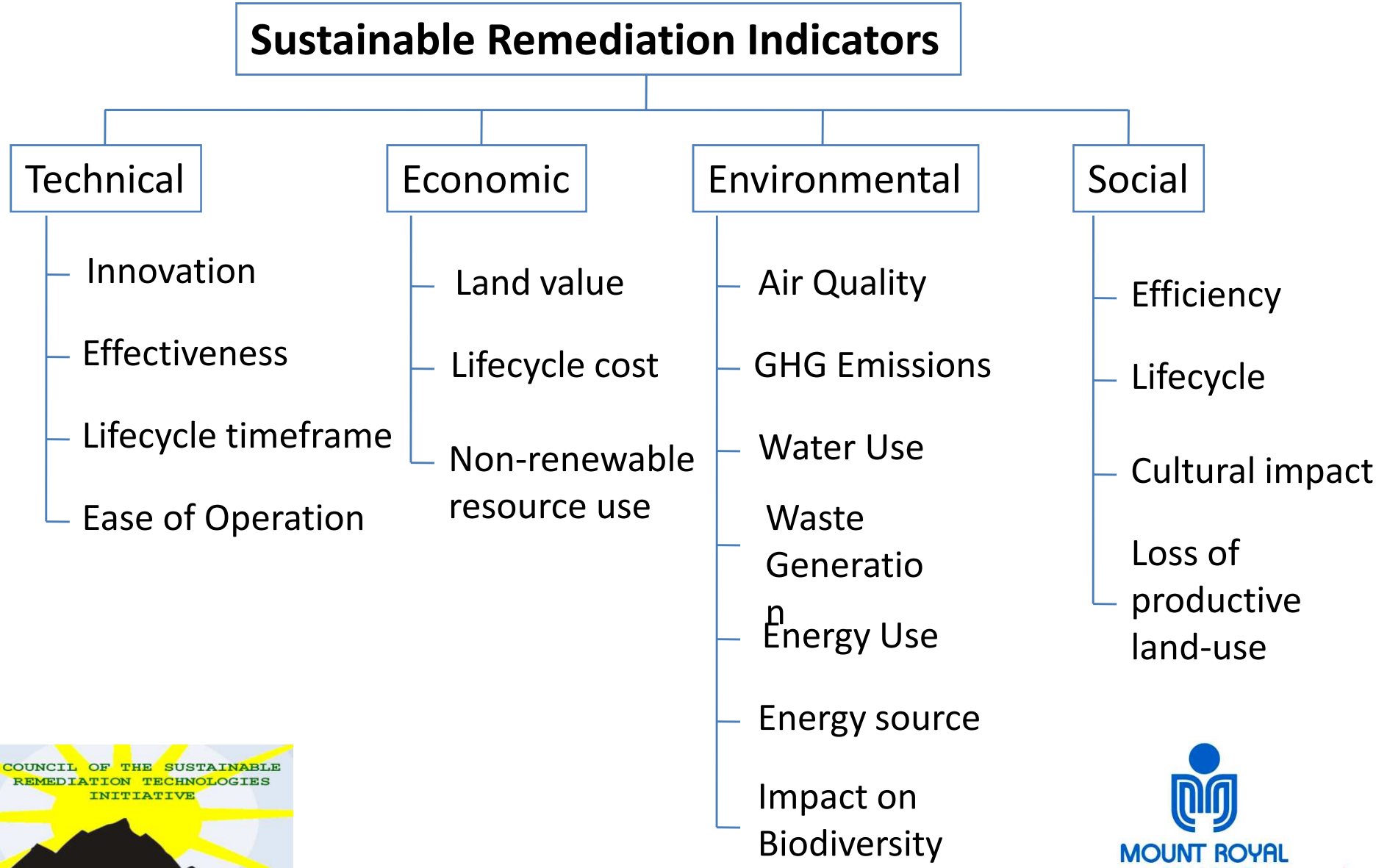
4. Our Activities and Achievements



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5. Conclusion

- Sustainability in remediation and in the selection and use of remediation techniques has to do with optimizing the benefits of remediation and the techniques while minimizing the costs over the entire lifecycle of the remediation process

- A set of sustainable remediation indicators have been articulated

- Remediation technologies indicators of sustainability developed should be useful:
  - as tools for knowledge, information transfer, and
  - as a solid base for remediation decision making.

- Those indicators, the decision aid and other activities of SRTI in collaboration with other stakeholders is expected to promote clean remediation technology

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Questions!

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