ROUNDTABLE ON SOUTH AFRICA'S NATIONAL STRATEGY FOR SUSTAINABLE DEVELOPMENT

WASTE GENERATION AND MANAGEMENT

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Waste generation and management : trends and projections

- domestic / commercial generation - exponential growth
  - no direct cost to householder
- current mining techniques generate much *waste*
- use of environmental Life Cycle Analysis in trade
- move focus from single product manufacture

Waste generation and management : risks

- depleted mineral resources; then residuals problem
  - acid mine drainage and toxic metals
  - coal discards
  - incomplete extraction
- toxicity of landfill leachate
- contamination of water resources
  - salinity, heavy metals, organics
- unacceptable dirty exports
- inefficient

Waste generation and management : opportunities – economic growth

- technology leap
- new customers; new habits; innovative infrastructure
- SA as a laboratory, learn, then export expertise
- use slow processes (e.g. biological)
  - acid mine drainage as heap leach system for waste
  - composting
- design for reuse
- transform mining and metallurgical knowledge to waste mining
- ecotourism

Waste generation and management : opportunities – social development

- major source separation initiatives
- combine organic waste reduction (composting) with other urban agriculture initiatives

Waste generation and management : alternative options

- climate change
  - CO_2 reduction – recycle reuse metals etc
  - combat desertification (organic waste composting)
- world response to resource depletion
  - higher resource prices / lower demand
  - dematerialisation
  - energy efficiency
  - increased recycling
  - more advanced materials