

## Working Terms of Reference

Development of the oil sands of northern Alberta has become an issue of growing public interest in recent years, with highly polarized views being presented by different stakeholders including First Nations, environmentalists, industries and governments, about the merits of this development compared with its environmental and health impacts. Regardless of what any individual chooses to believe about these divergent views, the scale of investment and development in the oil sands is an important factor in Canada's economy, making the issues involved of vital importance to Canadians. *RSC – The Academies of Arts, Humanities and Sciences of Canada* has assembled a panel of experts that is independent of the major stakeholders to review and assess available evidence bearing on these issues and identify knowledge gaps to provide Canadians with a scientific perspective in a summary report.

### Questions for the Expert Panel:

1. What are the major concerns (for example risks, risk factors) relevant to the next ~20 years, considering cumulative impacts, including:
  - Industrial processes
  - GHGs (including life cycle analyses)
  - Air quality
  - Water quality, quantity and aquatic ecology
  - Management of residuals and tailings ponds
  - Land Reclamation, land management
  - Economics and liabilities
  - Biodiversity and ecological integrity
  - Human health
2. What are current practices and regulatory framework (local, First Nations, national and international) for managing these concerns?
3. What are attainable objectives, standards, or principles, for appropriate management of these concerns?
4. What are the current levels of performance (quantitative and qualitative), gaps in performance and gaps in knowledge?
5. What are the various options for closing the gaps:
  - Technologies, present and forecast
  - Costs
  - The range of policy instruments (market-based, regulation, etc.)
  - Research
  - For all of the above, phase-in periods.