Radical Change

Athabasca oil sands listed as UNEP “hot spot” of environmental change.
Reclamation ≠ Restoration
Troubled Waters

- **Athabasca River:**
  - Licensed oil sands withdrawals = to a city of 2 million
  - Industry use takes precedence over protecting the fishery
  - Water quality impacts poorly understood
  - >15% of low flows

- **Alberta/DFO water management:**
  - Management response based upon flow rates (green, yellow, red)
  - But “red” ≠ STOP: no absolute limits on withdrawals
Toxic Tailings

- 40 years = 720 million m\(^3\) of toxic waste
- Tailings production = 1.8 billion liters per day
- Stored in “ponds” that already cover 130 km\(^2\)
- Leaching into groundwater & Athabasca River + risk of catastrophic discharge
- Theoretical reclamation
- Unresolved health concerns downstream

Photo: Jiri Rezac, WWF-UK
### Industry Not Implementing Best Practices

#### Under-Mining the Environment

**The Oil Sands Report Card**

<table>
<thead>
<tr>
<th>Operation</th>
<th>Percentage Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albion Existing (Muskeg River Mine)</td>
<td>56</td>
</tr>
<tr>
<td><strong>Potential annual environmental benefit through oil sands operations meeting performance standards of current industry leaders</strong></td>
<td></td>
</tr>
<tr>
<td>15,000 tonnes of NOx</td>
<td></td>
</tr>
<tr>
<td>8,500 tonnes of SO₂</td>
<td></td>
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<tr>
<td>50,000 tonnes VOCs</td>
<td></td>
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<tr>
<td>6,000,000 tonnes GHGs</td>
<td></td>
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<tr>
<td>73,500,000 cubic metres of water</td>
<td></td>
</tr>
<tr>
<td>Albion Expansion (Muskeg River Mine Expansion)</td>
<td>26</td>
</tr>
<tr>
<td>Syncrude</td>
<td>18</td>
</tr>
<tr>
<td>Synenco</td>
<td>18</td>
</tr>
<tr>
<td><strong>AVERAGE SCORE</strong></td>
<td><strong>33</strong></td>
</tr>
</tbody>
</table>

Existing Projects | Proposed and Approved Projects
Oil Sands – more than an Alberta problem…
Policy & Performance Gaps

- Federal & provincial GHG regs:
  - Do not require (or will achieve) absolute reductions in the near term
  - Do not set a sufficiently high carbon price to compel investment in CCS
  - Are overly complex and full of loopholes

- Federal government dodging responsibility
  - Species at risk, climate change, transboundary impacts

- Government of Alberta
  - No science-based limits to inform decisions
  - “We just need to communicate better”
Key Policy Gaps

- Land Use Plan
- Consultation before lease sales
- **Protective** limits on the Athabasca River
- Prohibition of liquid tailings
- Comprehensive health study
- Mandatory Carbon Capture
- Best Available Technology for acidification
Conclusions

- **Highest impact unconventional oil**
  - Very intensive on a per-barrel basis
  - Absence of regulatory frameworks to protect the environment
  - Pace and scale of development is unsustainable

- **Weak voluntary efforts by companies**
  - Potential solutions not being implemented

- **Situation/risk is worsening**
  - Improvements outstripped by increases in production
For more information:

- Visit [www.oilsandswatch.org](http://www.oilsandswatch.org)

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