Risk Governance for the Arctic

Dr. Reto Schneider Swiss Re
some of our concerns

Climate change

ATMOSPHERIC CIRCULATION FEEDBACKS

OCEAN CIRCULATION FEEDBACKS

ICE SHEETS AND SEA-LEVEL RISE FEEDBACKS

MARINE & LAND CARBON CYCLE FEEDBACKS

METHANE HYDRATE FEEDBACKS

marine cargo, fishery, biodiversity, food-chain, migration routes, benthic organisms...
Relevance (2/3)

Arctic Drilling Sites

Source: The Guardian, November 2010
Risk Assessment

- Risk = Probability (x) * Severity (x)
- Insurance premium is a proxy for an return period for expected losses

**BUT**
Risk Assessment in insurance

- **Risk in (Liability insurance):**

  \[
  \text{Risk} = P(x) \times S(x)
  \]

  *acceptance*

- **Event, accident, spill > injuries, damages, environmental impacts, financial losses**
  - Liability?
  - Insured/"covered loss"
  - Insurance limits bought?
  - Legal defence costs are already part of insured losses!
Global Risk Assessment Framework

- **Drivers (Op. Environment)**
  - Natural Catastrophe
  - Man-made

- **Hazard**
  - Intensity
  - Frequency

- **Vulnerability (Hazard vs. Asset)**
  - Perceived Value
  - Protection Measures

- **Assets/Lives**
  - Life & Health
  - Physical Property
  - Financial Wealth & Income
  - Social & Psychological
  - Ecological

- **Risk Scenarios**
  - How Big? (Impact in $)
  - How Shocking? (contagion, speed, accumulation)
  - How Likely? (Likelihood)

- **Risk Severity**
Risk Governance, risk characterization

Pre-assessment:
- Problem framing
- Early warning
- Screening risk and concern assessment
- Modelling and evaluating risks and concerns

Appraisal, concern assessment:
perception of fear and dread, generations involved, personal institutional control, trust, type of damage, uncertainty, ubiquity, persistence, delay, reversibility, fairness, potential for mobilization
Risk Appraisal

Source: ‘White paper on Risk Governance – Towards an integrative approach’
IRGC, Ortwin Renn
Headline risk: Examples 2008 - today
Reputation Risk

- **Ending Harmful Investments**
  - BankTrack 2008

- **Insuring Repression**
  - Exposing how the insurance industry supports Burma’s dictators
  - The Burma Campaign UK

- **HSBC criticized for palm oil related violations in Indonesia, Malaysia, PNG partners**
  - Profundo 2008

- **UK banks fund deadly cluster-bomb industry**
  - The Independent, 2011

- **New Report - RBS is UK’s biggest tar sands funder**
  - People & Planet 2011

- **Ad in Ethical Corporation magazine, summer 2010**

- **One-page ad in FT, fall 2009**

- **Swiss Re**

**SwissInfo, 2010**

- **Banken wegen Finanzierung von Streubomben im Visier**
  - Die Schweizer Banken UBS, Credit Suisse und Vontobel gehören laut Nichtregierungs-Organisationen zu den Finanzierern der Streubomben...
  - SwissInfo, 2010
NGO Activism in the Finance Sector

- Top NGO topics are energy-focused:
  - bank investment in carbon industries
  - bank investment in oil sands
  - bank investment in large dams

Source: SIG Watch, Nov 2011: *Global NGO Tracking and Issues Analysis*
Pre-emptive Reputation Risk Management: Canadian Oil Sands

"Swiss Re has been fully greenhouse neutral since 2003"

Swiss Re's business exposure: Overall IRI capacity related to oil sands

Supersector leader in the Dow Jones Sustainability Index

"Innovative insurance solutions are key to making local communities more resilient to climate risks"

Source: National Geographic
A cross-functional approach: Oil sands (primarily Canada)

Due to great carbon intensity of oil sands operations, insuring them is in stark contrast with Swiss Re's climate change positioning ⇒ reputation risk

- **Risk Identification**
  - SONAR entry
  - Input P&C Risk Management and Centre

- **Risk Measurement**
  - Sustainability & Emerging Risk Management, IP Energy & Power, Risk Engineering Services assess oil sands controversy and recommend that Swiss Re develop a position and selective approach toward oil sands operations

- **Risk Mitigation**
  - RES develops a rating tool, based on NGO and engineering criteria
  - Each oil sands operator gets rated by RES: only best in class to be insured
  - Products and Client Markets engage with insured on environmental and social performance

- **Risk Monitoring**
  - Continuous observation of oil sands operators (insured and not insured), relevant legislation, and public sentiment
  - Assessment on its application to other areas such as Oil & Gas Shale
Business opportunity and sustainability

Swiss Re considers sustainability aspects in the underwriting process, including

- Pure insurance risk-related aspects, such as frequency and severity assumptions of global warming
- Reputational risk-related aspects, considering the consistency of corporate values and insurance activities. Regular monitoring of potential conflicts provides information on critical segments

→ Oil sands and oil & gas shales are a general corporate social responsibility topic, if NGO activities is for example taken as indicator

→ is arctic drilling the next upcoming topic?
Better insight thanks to open communication and provided questionnaire improved rating
iNTegRisk Project

Oil exploration in remote areas

WP 1.4 Case specific early warning indicators
   K. Oien, RK Tinmannsvik (SINTEF), G. Haugen, L Keane,
   L. Nielson (Eni Norge) J. Buston, D. Lisboa, M. Wardman,
   J. Wilday (HSE-HSL)

Example: Floating Production, Storage and Offloading vessel installation
and connection to the sub sea system.

Process Safety indicators
Risk control systems
KPI's
### Number of Sensitive Business Risk referrals 2011 by Sustainability theme

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
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<tr>
<td>Other issue/industry</td>
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<tr>
<td>Multi-issue</td>
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<td>Forestry and Logging</td>
<td>2</td>
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<tr>
<td>Animal testing</td>
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<td>Governance (eg, mgmt behaviour)</td>
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<tr>
<td>Oil &amp; Gas</td>
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<tr>
<td>Dams</td>
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<td>Mining</td>
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<td>Environmental degradation</td>
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negative press releases & reputational risk
Future outlook Trend

- Arctic oil and gas is on the strategic agenda due to fear of energy dependence and/or shortages. This, combined with rising prices and increased accessibility to the Arctic, means that the pressure to exploit the region’s hydrocarbon resources will further increase.

- However, geopolitical issues and stringent environmental regulations could hinder or delay development.
Concerns for risks incl. reputation risks

- Arctic drilling will most likely continue, but with heightened governmental and public awareness of the potential consequences of a major oil spill following a blow out.

- Despite strict regulations, the potential for oil spills will remain. The Arctic ecosystem is perhaps one of the most vulnerable to oil spills on earth. Offshore Arctic drilling carries inherent risks for both the environment and communities. To date there is no proven technology to clean up an oil spill in the Arctic Ocean.

- Environmental and social risks will increase as industrial drilling activities increase.

- As the sea ice melts, untapped Arctic hydrocarbon resources become more accessible, resulting in increased oil drilling. Greater extraction of fossil fuels that will eventually be ‘burned’ for energy production will again result in more greenhouse gas emissions that further contribute to climate change.
The future of the arctic

Illustration 6.1 Scenarios matrix. Source: AMSA
Thank you
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