



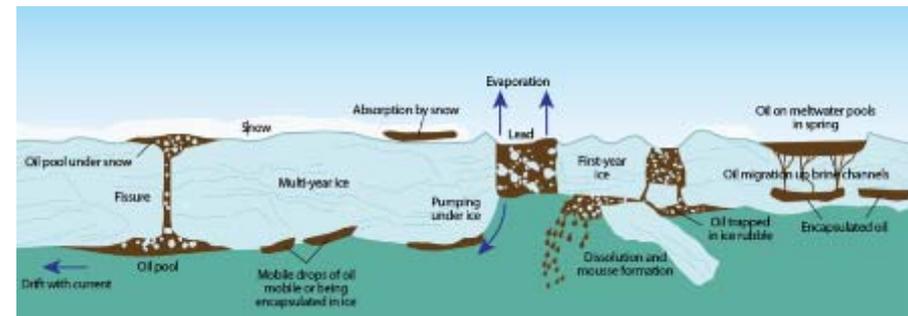
The Arctic - Regulating business to protect the last frontier

EP Hearing - The Arctic melt

Nicolas Fournier | 11 April 2013

Gaps and risks

- > The risks of Arctic Ocean drilling are multiples and stem from an overwhelming lack of **Knowledge, Governance and Preparedness**, including infrastructures and technological capabilities.
 - **Complex ice-oil interactions**
 - **Inadequate response plans**
 - **A true frontier for the industry**
 - **Oil Spill Response Gap analysis**



AMAP 2007; Bobra and Fingas 1986

Regions	Canadian Beaufort Sea	US Chukchi Sea	West Greenland	Norwegian Sea
Estimated Response Gap	20 - 65% summer 100% in winter	60-80% in winter	35 - 85% summer 100% in winter	65% in winter 30% in summer

- > The science - policy gap is becoming extremely dangerous

A business opportunity?

- Business opportunities are essentially markets driven
 - Negative externalities arise because of market and governance failure
 - Industry appears to show little concern for risks by Arctic drilling
- Oil & Gas industry poor safety records

Figure 6: Offshore hydrocarbon releases
2002/2003 – 2011/2012p

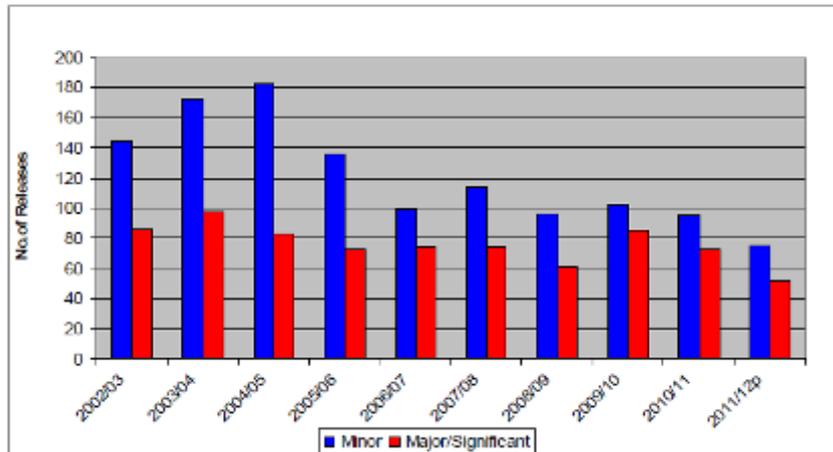
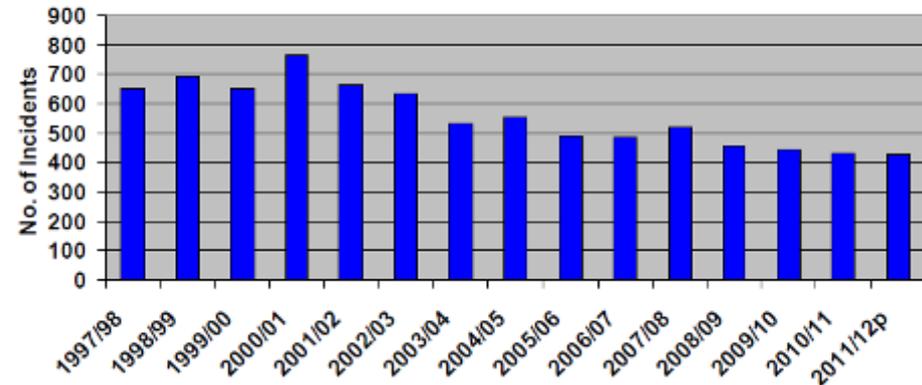


Figure 5: Dangerous occurrences
1997/1998 – 2011/2012p

HSE - Offshore Safety Statistics Bulletin 2011/12



- In much known areas, incidents are too frequent.
- Safety records fail to inspire public confidence
- Safety statistics show that the industry is far from being Arctic ready

Arctic oil is not worth the investment

The Economist

Intelligence Unit

Arctic oil is not worth the investment – at least for now

Extracting oil from the Arctic will be a slow and costly game – access to the reserves is both technically challenging as well as expensive. Furthermore, increasingly stringent environmental regulations are likely to further raise the cost base.

While producing offshore Arctic hydrocarbons might satisfy some energy security concerns, it is by no means certain that prevailing oil prices will be sufficiently high to make investments economically attractive.

Growth in global oil consumption is expected to slow down to 1-1.5% over the next 10-15 years. We see oil consumption in terminal decline in Europe and Japan partly owing to unfavourable demographics, particularly in the latter, and partly owing to subdued economic growth and ongoing efforts at environmental conservation, such as through increased use of fuel-efficient cars or home insulation. Growth in North American oil consumption will also be minimal as the scope for energy efficiency gains is much greater in the US than in other parts of the developed world.

In emerging countries, growth is likely to be steadier, especially as car ownership levels start to take off. However, efforts to curb fuel consumption and improve energy efficiency are equally likely to increase.

Lastly, alternative sources of energy have the potential to become serious components of a country's energy mix. Biofuels, for example, are already an important component of transport fuel in many countries. Increasingly, we could see the adoption of second-generation biofuels that are much less politically sensitive – as they are not human foods. Equally, alternative (cheaper and cleaner) hydrocarbons—for example, natural gas—could be adopted on a wider scale by transport fleets. The boom in shale gas production in the US has already seen public fleets in the US switch to natural gas and within a 15-20 year timeframe we could see a significant increase in shale gas production outside of North America. Shale oil production also offers the potential for significantly cheaper and, arguably, safer sources of oil supply than the Arctic. In the meantime, Iraq will be able to tap its huge reserves to produce oil at a fraction of the cost and difficulty of drilling in the Arctic.

In summary, consumption is unlikely to grow and that has price implications, especially in view of increasing supply. Our current projections envisage real prices to remain relatively stable as price-competitive alternatives join the market and/or fuel efficiency levels continue increasing. We may hence be further off from the need to drill in the Arctic than we think.

- Increasingly costly
 - Slow down global demand
 - Consumption decline in Europe
 - Fuel-efficiency efforts
 - Competitive energy alternatives
- Question the economic sense and long term value of Arctic oil?
 - Shell lost nearly 5 bn USD in its Arctic campaign

Government intervention is needed

- Public intervention to frame economic developments, regulate access to resources and protect common public interest
- Account for externalities and long term preservation of Arctic values
- Social acceptability of offshore hydrocarbons
 - Political incoherence: roadmap towards a low-carbon society?
 - A moratorium as a precautionary approach



NEWS: Around the Arctic April 02, 2013 - 8:40 am

Greenland's new government puts the brakes on more offshore drilling

Coalition also plans to revisit large-scale mining law

EU relevance in the Arctic

- › An area of growing strategic importance
 - Building of an EU Arctic policy to gain credibility as an Arctic player,
 - European Economic Agreement (EEA) and trade relationships
- › EU Offshore Safety Directive (2013)
 - Fall short of ambitions, very similar to the existing “North-Sea regime”
 - No EU supervision of the sector, weak provisions on financial liability
 - Positive change with an EU “oil-spill response effectiveness” calculation
 - Adoption of an EU Moratorium in ENVI committee
- › Inadequate Arctic governance
 - Arctic Council was not designed to cope with the current resource rush
 - UN Arctic Treaty to recognize its role in our planet’s cooling system
 - Marine sanctuary to conserve a common heritage of mankind



Secretariat of the Antarctic Treaty
Secrétariat du Traité sur l'Antarctique
Секретариат Договора об Антарктике
Secretaría del Tratado Antártico



Thanks for your attention !

