



Netherlands Commission for
Environmental Assessment
Dutch Sustainability Unit

Evaluation of the report: "Protecting the Arctic"

By the Environmental Audit Committee

The Arctic



11 October 2012





Dutch Sustainability Unit (DSU) Recommendations	
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From	Arend Kolhoff (Netherlands Commission for Environmental Assessment, DSU)
Date	09 October 2012
Subject	Evaluation of the report <i>Protecting the Arctic</i> drafted by the Environmental Audit Committee on behalf of the British House of Commons
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1. INTRODUCTION

The Directorate General for International Cooperation (DGIS) requested in its e-mail dated 21 September 2012 that the Dutch Sustainability Unit (DSU) evaluate a report published on 20 September 2012 by the British House of Commons' Environmental Audit Committee titled *Protecting the Arctic: Second Report of Session 2012-2013*.

The complete report has been evaluated. However, at the DGIS' request we examined the section on oil and gas recovery in greater detail. The following questions took precedence for the purpose of evaluating the report:

- Are interests in the Arctic region being adequately represented?
- Is the information complete and correct?
- Can conclusions and policy-making recommendations be logically deduced from the report's observations and analyses?

Three experts were employed to perform the evaluation – M.J. Brotsma, T. Hoencamp and E. Huber. They are principally competent in the fields of oil and gas recovery and its associated environmental effects.

2. REPRESENTATIVE

Question: Are interests in the Arctic region being adequately represented?

- a. We are of the opinion that all interests are being represented. The report has been based on a) interviews with twenty-five experts (*witnesses*) and b) written responses from twenty-eight persons/organisations (*written evidence*).
- b. It should be clearly stated that it is not evident from the report how these experts (*witnesses*) were selected. The experts could be viewed by their own interest groups as being top experts.
- c. We are of the opinion that two important representatives from within the oil and gas sector and one important NGO should also have been interviewed:

Oil and Gas Sector – the interests of the oil and gas sector are represented by two privately held companies (Shell and Cairn), which is a rather narrow representation in comparison to the broader representation of other interests. In our opinion, two umbrella organisations – the International Association of Oil & Gas Producers (OGP) and the Global Oil and Gas Industry Association for Environmental and Social Issues (IPIECA) – should have been consulted because they are better able to provide information about the latest status concerning *oil spill response* than the two private parties interviewed.

NGOs – the International Union for Conservation of Nature (IUCN) should not in our opinion have been overlooked by virtue of their direct involvement in



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various projects in the field of mineral extraction in the Arctic region, including oil and gas exploration. IUCN assists with groundbreaking scientific research into the protection of the grey whale close to the Sakhalin 1 and 2 projects involving all the major players in the Arctic region (Shell, Gazprom, ExxonMobil and Rosneft).

3. COMPLETE AND CORRECT INFORMATION

General

We are of the opinion that the report is complete and that all relevant issues have been detailed. Given the complexity of the problem, this is quite an impressive feat. In general, facts have been summarised and formulated correctly, which is no simple task given the diversity of opinions, e.g. about methane emission levels in melting permafrost regions.

An important issue in such a study is pinpointing and evaluating the uncertainties. The various experts pinpointed these uncertainties well and thereby the bandwidth relating to climate predictions and anticipated developments concerning the extent and volume of polar icecap. This is just one aspect of many.

Oil & Gas Sector

Information in the report about the oil and gas sector is partially incorrect. We can illustrate this by means of the following six examples:

- The report has based its determination of the risk of oil spills (*loss of containment*) on experiences over the past twenty to thirty years, and has been extrapolated for the future without taking into account the enormous improvements made to oil company HSE management, e.g. the number of Lost Time Incidents (LTIs) has been reduced by a factor of 20 throughout the same period. The risk of an oil spill occurring has been grossly overestimated by excluding industry improvements made over the past few decades.
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- The report makes a direct comparison between the Macondo spill in the Gulf of Mexico and a potential spill in the Arctic region close to Alaska. The anticipated volume of oil released was directly converted without taking into account major differences between reservoirs and water depths. Pressures in the Gulf of Mexico reservoir are approximately 13,000 psi, whereas pressures in reservoirs near Alaska are anticipated to be approximately 4,000 psi. These pressure differences in combination with differences in water depth (approx. 3,000 m at Macondo and 50–100 m in the Chukchi Sea's shallow waters near Alaska) would result in a vastly different oil spill scenario and its subsequent spread.
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- The report states that the industry is poorly prepared for an oil spill. Indeed, no *Oil Spill Response Plan* exists for the Arctic region, but training exercises most definitely form part of oil companies' oil spill response planning. For example, a large-scale training exercise was held this year (2012) in Norway by ENI and other oil companies.
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- The report states that the percentage of oil that can be cleaned up after a spill has been estimated to be between 2 and 5%. These figures are largely based on experiences gained cleaning up the *Exxon Valdez* oil spill in Alaska over twenty years ago. Modern-day techniques and oil spill response preparedness can contain far larger volumes of oil in the event of an oil well spill.
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- The report suggests that current Arctic region exploration practices cannot be characterised as being best practices. In our opinion, this has not been substantiated. Shell and Cairn's drilling activities near to Alaska and Greenland would appear in our view to be fairly well aligned with these principles. The way in which residual risk is assessed, i.e. whether residual risks are acceptable, is a social and political issue for which there are many points of view. Greenpeace is conducting a campaign against drilling (*Ban Shell in Alaska*) and Total has stated that it believes the risks associated with exploratory drilling for oil in the Arctic region to be too great, in contrast to its views on exploratory drilling for gas that it finds acceptable.
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- The report makes no clear-cut difference between exploration and production. Exploration in the Arctic region takes place during a limited period as dictated by conditions, e.g. exploration activities can be halted in bad weather, for ice drift and during native people's hunting season, thus limiting risks and any potential impact. Nonetheless, risks exist due to uncertainties associated with tapping a reservoir for the first time. In contrast, the production phase - anticipated to start in another ten years' time for offshore reservoirs - theoretically runs all year round with all its inherent risks. It should be noted in this respect that according to current insights production will take place using subsea structures and pipelines buried deep below the seabed, thus limiting any operational risks.

Lastly, it should also be noted that no use has been made of several recent EIA reports drafted for exploratory drilling activities in the Arctic region and used as a basis for issuing environmental permits. These reports illustrate the latest state of technology and expertise relating to the region's sensitivity (both environmental and social) and detail various mitigating measures. An oil spill response plan forms part of an EIA.

4. CONCLUSIONS AND RECOMMENDATIONS

The report has been drafted from the perspective of the UK and focuses on the UK's interests and position in the Arctic region.

Approximately half of the conclusions and recommendations formulated (pp. 70–74) cannot be logically deduced from the report's observations and analyses, and have not always been properly substantiated; they are somewhat *biased*. British and green interests weigh more heavily than the interests of the oil and gas sector. In part, this seems to have been caused by the committee's composition made up of politicians and in part due to the fact that no attempt has been made to incorporate this information.

The report's conclusions and recommendations have been given below (pp. 70–74). The numbers correspond to the numbers used in the report. The DSU has translated and summarised the report's conclusion/recommendation under the header 'Report'. The DSU has indicated the extent to which a conclusion/recommendation has been properly substantiated based on the report's observations and analyses under the header 'DSU'.

The effect of climate change on the Arctic region.

1. Report: Effects of climate change are clearly visible in the Arctic region.

DSU: This conclusion has been properly substantiated.

2. Report: Increased methane emission levels as a result of climate change.

DSU: Conclusions are correct that a wide range of opinions exist as to how fast this process is taking place.

3. Report: Several tipping points are listed for the climate change process. Climate change will accelerate once they have been passed.

No consensus exists about the speed at which tipping points are being approached. Further research is required in order to be able to properly substantiate further actions.

DSU: This conclusion has been properly substantiated.

4. Report: Geo-engineering techniques do not yet provide a solution to reducing Arctic region warming.

DSU: Conclusions and recommendations have been properly substantiated.

5. Report: Ecosystem risks resulting from the effects of Arctic region warming and potential climate tipping points, as well as the additional risks associated with oil and gas exploration and shipping mean that every available option needs to be seized in order to be able to make a difference. Tackling shipping emission levels is a prime example.

DSU: This is not a conclusion based on facts, but more an opinion that suggests that it is necessary to make a statement now for change and action. The recommendation for reducing shipping emission levels is understandable from the point of view of mitigating greenhouse gases and *black carbon*, but the effect has not been substantiated.

Oil & Gas Exploration

6. Report: General consensus exists that climate change is partially caused by the use of fossil fuels and their associated CO₂ emissions.

DSU: The suggestion that a moratorium on drilling in the Arctic region would have a positive effect on reducing CO₂ emission levels seems logical, but the potential contribution it would make in this respect has not been substantiated. We believe that a comparison of several potential fuel mix scenarios would need to be made in order to gain an insight into the effect exploiting oil and gas reserves in the Arctic region would have on climate change. This has not been carried out.

7. Report: Establishing a Citizen Advisory Council to involve citizens in oil and gas sector developments.

DSU: This recommendation has not been substantiated. Consequently, we cannot evaluate whether establishing a Citizen Advisory Council would be the most suitable means of involving citizens. Ideally, a comparison of various mechanisms should be made. The DSU experts that we hired to evaluate the report have insufficient expertise in this area to make any recommendations about mechanisms that might be effective. If necessary, we could hire an expert in the field to evaluate this recommendation.

8. Report: A moratorium on drilling in the Arctic region is proposed.

DSU: Substantiation for this recommendation has been partly based on incorrect information about the oil and gas sector (six examples given in Section 2). Broad-based support exists for imposing conditions on drilling in the Arctic region that have already been partially implemented by means of strict legislation in various Arctic states such as Canada, Greenland, Norway and the USA. Our opinions about the conditions stated have been listed below.

- a. In our opinion, a *competition* is taking place to impose even higher standards for industry in the Arctic region. This is a positive development because it forces the sector to invest in developing new technologies, thereby reducing the risk of spills. In terms of market, reputation and communications, the industry is theoretically already operating in the Arctic region according to the highest standards and

- best practices as they currently exist. This does not include Russian companies, but they are also making every effort to catch up.
- b. A pan-Arctic *Oil Spill Response Plan* is being drafted and the DSU emphasises the need for such a plan.
 - c. Establishing a joint fund will be difficult in practice. Large oil companies have committed to cleaning up any spills that they cause in full and with unlimited liability. As a result of which only the most financially solid companies can actually afford to operate in the Arctic region. Greenland – for example – also has policies in place that only permit the most financially sound companies to operate in these vulnerable regions.
 - d. Establishing an industry peer review group to evaluate one another's plans and measures is a good recommendation. Mutual consultation and sharing experiences already take place on a regular basis as part of the OGP.
 - e. Further research into oil spill response techniques is required and is already being conducted in various locations. A joint industry initiative is already in effect to research the behaviour of oil spills and their remediation in the Arctic region. Reputable institutes such as SINTEF in Norway are playing a very prominent role in this respect.
 - f. Establishing protected zones is a good recommendation. What is missing in our opinion as part of this recommendation is the development of a zoning plan for the entire Arctic region that prohibits shipping, fishing and oil recovery in vulnerable regions. Such a plan has been drafted for the Barents Sea based on a *Strategic Environmental Assessment (SEA)* that is regarded by various interest groups as a prime example of zoning for the Arctic region.

Shipping and Fishing

9. Report: Increased shipping is forecast for the Arctic region. This provides opportunities for UK businesses and ports that in turn provide opportunities for UK authorities to play a role in the regulation of future shipping in the Arctic region. The British government needs to assess how they can support relevant sectors that meet the requirements for the sustainable development of the Arctic region.

DSU: The conclusion focuses on the UK, but the Dutch government could also do the same for the sectors relevant to the Netherlands.

10. Report: Clear risks exist inherent with increased shipping levels in the Arctic region. Effective standards, e.g. for safe navigation, need to be enforced as soon as possible via the IMO.

DSU: The IMO is the foremost organisation regulating shipping and should also draft guidelines for the Arctic region. Designating areas of the Arctic

region as *Particularly Sensitive Sea Areas* is a good and viable recommendation.

11. Report: The British government should play an active role in drafting a new international treaty for the protection and sustainable usage of marine biodiversity for the entire Arctic region.

DSU: The need to draft an international treaty has been properly substantiated.

12. Report: The UK has *Observer* status on the Arctic Council and can exercise its influence in this respect to regulate sustainable fishing practices in the Arctic region.

DSU: The need to regulate sustainable fishing has been properly substantiated. The report states that the UK can contribute towards implementing such regulation through the EU and as an observer on the Arctic Council. The report's conclusion opts for a contribution through the Arctic Council, but does not substantiate this choice.

Arctic Region Management

13. Report: Establishing protected areas in a part of the Arctic region. It is stated that this needs to be a pre-condition for further oil and gas exploration.

DSU: This conclusion has been properly substantiated, but the pre-condition is not particularly realistic because several countries have already been drilling in the Arctic region for some time now. The recommendation to concentrate on establishing these areas through the UN and as an observer on the Arctic Council is a good strategy because the UK's influence on the Arctic Council is thought to be limited.

14. Report: Drafting an *Arctic Strategy* for the British government.

DSU: This recommendation is understandable and we recommend that the Dutch government also develop such a strategy, as Dutch interests in the Arctic region are relatively large.