The Moscow Times
30 YEARS
INDEPENDENT NEWS FROM RUSSIA

Why Arctic Council Needs to Tame Its Oil Rush

By Arne Jernelov

January 21, 2013

The rapid shrinkage of Arctic ice cover is one of the most dramatic changes in nature currently occurring anywhere on the planet, with profound environmental and economic implications. We stand to lose one of the Earth's largest and most significant ecosystems. At the same time, however, the once-fabled northeast and northwest passages will reduce shipping times and costs by as much as half, bringing China and Japan much closer to Europe and North America's east coast.

More immediately, the Arctic's vast reserves of fossil fuels and minerals will become far more accessible than they are today. On land, oil fields in Alaska and gas fields in northern Russia have been producing hydrocarbons on a large scale for many years, but the estimated reserves under the Arctic Ocean are much larger. At today's prices, these reserves could be worth more than $7 trillion, according to international energy companies. Factoring in the accompanying natural gas, $10 trillion would probably be a conservative figure.

Because much of the Arctic Ocean is shallow and located on continental shelves, the bordering

countries are scrambling to stake claims to exclusive economic zones under the United Nations Convention on the Law of the Sea. The political heat is also being turned up in the Arctic Council, a body set up to facilitate cooperation between states with Arctic territories. Besides the eight members — Canada, the five Nordic countries, Russia and the United States — the council has six permanent observers, including major countries like Germany, France and Britain. Now China, India and Japan are pressing to get in.

In addition to countries competing for the position in the Arctic, large oil and gas companies are very active, too. In the wake of the BP oil spill in the Gulf of Mexico in 2010 and the subsequent U.S. drilling embargo, the approval of Shell's drilling operations off the Alaskan coast received considerable media attention. But this year's planned drilling of three wells in the Chukchi Sea and two in the Beaufort Sea was first reduced to one well and then postponed until next year after a containment dome, an emergency device for stopping a blowout, was damaged.

In other parts of the Arctic, though, exploratory drilling has continued. Cairn Energy is drilling south and west of Greenland. In Russia, Rosneft and BP are involved in a complicated arrangement to exploit Arctic offshore oil and gas resources — for example, in the Pechora Sea. Rosneft has also signed exploration agreements with Statoil, ExxonMobil and Eni. Of the large oil companies, only one, France's Total, has argued against Arctic oil exploration and exploitation on the grounds of environmental risks and economic costs.

There are several oil-related environmental risks specific to the Arctic Ocean. For starters, there is the weather and climate. Even if the Arctic Ocean becomes ice-free in the summer, most of the year it is not, and icebergs from melting glaciers will become more common and possibly larger. This, together with frequent, powerful and icy storms that appear on short notice, increases the likelihood of blowouts and other spills.

Then there are the problems associated with remoteness. The BP disaster in 2010 happened in the best possible place in terms of nearby resources for capping a blowout. The Gulf of Mexico contains the world's largest concentration of oil companies, subcontractors, petroleum engineers, equipment and workshops. Yet it took three months to cap the Macondo well. In the Arctic, all of those resources are thousands of kilometers away. In the Gulf, the cleanup operations engaged tens of thousands of people in Mississippi and nearby U.S. states. Where are such people to be found in the Arctic?

Furthermore, in warm waters, most of the oil and its effects largely dissipate within five years. In cold waters, however, recovery takes much longer, as the Exxon Valdez spill in Alaska in 1989 demonstrated. The rule of thumb that chemical and biochemical processes double in speed with each increase of 10 degrees Celsius is a reasonable approximation here, too. Thus, processes that take five years in the Gulf of Mexico would take more than 20 in the Arctic.

Meanwhile, in the low biodiversity ecosystems of the Arctic, with their simple food webs, so-called cascading effects are more pronounced than in temperate or warm regions. The demise of one species or trophic level, which contains organisms performing the same function in the food chain, leads to changes in others in a rapid sequence that is difficult to foresee.

The new U.S. rules for offshore oil operations in the Arctic, which forced Shell to postpone

drilling until next year, are certainly stricter than the old rules and will reduce the risk of a blowout. But if one occurs, the only reliable way to stop it and cap the well is to drill a relief well. That takes months in the best of circumstances, and it could take a year or more in the Arctic.

There is, however, one way to shorten the time required to cap a well to a matter of days: Drill two holes in parallel from the start. In case of a blowout in one hole, the other could quickly become the relief well.

Obviously, this would cause the cost of drilling to increase significantly. But if we cannot wait to explore for oil in the Arctic until we have the technology to do it safely, the authorities should demand no less of the oil companies.

Arne Jernelov, a former director of the International Institute of Applied Systems Analysis in Vienna, is a United Nations expert on environmental catastrophes.

Related articles:

- Private Oil Firms Could Get Licenses for 20% of Shelf
- WWF Wants Cross Border Study With Norway
- Scramble for the Arctic to Dominate Environmental Agenda

The views expressed in opinion pieces do not necessarily reflect the position of The Moscow Times.

Original url:
https://www.themoscowtimes.com/2013/01/21/why-arctic-council-needs-to-tame-its-oil-rush-a20798