

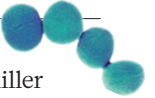
NEWS IN FOCUS

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Spills from pipes or rigs in icy areas such as those in Alaska are particularly challenging to clean up.

ENVIRONMENT

The great Arctic oil race begins

Conservationists fear spills in icy waters as Norway awards oil-production licences.

BY QUIRIN SCHIERMEIER
IN TROMSØ, NORWAY

“The race is on for positions in the new oil provinces.” That starting-gun quote was fired last week by Tim Dodson, executive vice-president of the Norwegian oil and gas company Statoil. The ‘new oil provinces’ are in the Arctic, which brims with untapped resources amounting to 90 billion barrels of oil, up to 50 trillion cubic metres of natural gas and 44 billion barrels of natural gas liquids, according to a 2008 estimate by the US Geological Survey.

That’s about 13% of the world’s technically recoverable oil, and up to 30% of its gas — and most of it is offshore.

Oil companies see an opportunity to sate the world’s demand for fossil fuels. Green groups and many scientists, however, are horrified by the prospect of drilling and production in remote, often ice-choked waters, where spills would be harder to control and clean up than in warmer regions. Memories of the devastating environmental impact of the *Exxon Valdez* accident in 1989 in Alaska’s Prince William Sound are still all too fresh — like the oil that can still be found in the area’s beaches (see

Nature <http://doi.org/d3gqd2>; 2010).

At last week’s Arctic Frontiers conference in Tromsø, Norway, the oil industry insisted that it will be cautious and responsible in extracting oil and gas in the region, and it rolled out an initiative to develop ways of coping with any accidents. Dodson told the meeting that “technology will be there to clean it up”.

Statoil already operates the world’s most northerly liquefied natural-gas production facility near Hammerfest, which draws gas equivalent to about 48,000 barrels of oil a day from the Snøhvit field in the Arctic waters off Norway. By 2020, the company hopes to extract one million barrels of oil equivalent a day from new wells in the Arctic. It is planning exploratory drilling later this year, for example, in the Skrugard and Havis gas fields that were discovered in the Barents Sea last year.

The Norwegian government is happy with Statoil’s bold plans. Norway is currently the world’s second-largest gas exporter, with production continuing to rise, but it is looking to the Arctic to offset a one-third decline in production at its oil fields farther south since 2000. “If we don’t invest, we might lose another third within the next decade,” says Ola Borten Moe, Norway’s minister of petroleum and energy.

On 17 January, Moe awarded 26 production licences for developed offshore oil areas in the Norwegian and Barents Sea to companies including Statoil, Total, ExxonMobil and ConocoPhillips. And the settlement in 2010 of a long-running row between Norway and Russia over their Arctic maritime boundary will allow more exploration in formerly disputed parts of the Barents Sea (see ‘Frozen fuels’). “There’s an ocean of new opportunities that we will grasp with both hands,” says Moe.

The resource rush is alarming critics. A group of 573 scientists, for example, wrote last week to US President Barack Obama, urging caution in authorizing new oil and gas activity in the Arctic Ocean north of Alaska. The open letter, coordinated by the Pew Environment Group, a conservation organization headquartered in Washington DC, argues that more research is needed to assess the potential impact on the region’s environment and ecosystems before going ahead with more drilling.

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The industry holds that Arctic oil and gas development can be done in an environmentally ▶

► sustainable manner despite the challenges. “We realize that there are huge issues when working in the cold and darkness and in the presence of sea ice in areas at great distance from any infrastructure,” says Joseph Mullin, a London-based programme manager at the International Association of Oil and Gas Producers. Mullin will oversee a four-year, US\$20-million research programme to address those issues, launched at the Tromsø conference by nine major oil companies.

The initiative, which is open to academic collaborators, will include research on the environmental effects of Arctic oil spills, spill trajectory modelling and remote sensing, and oil recovery techniques in sea-ice areas. It will also test Arctic clean-up technologies in a number of controlled oil releases. “You’d like to have a variety of spill-response options in the tool box before you venture out there,” says Mullin.

The leading Russian oil and gas companies,



FROZEN FUELS

A 2010 Norwegian–Russian border agreement has opened up the Barents Sea to oil companies eager to exploit resources.

Oil and gas facilities: ● Planned ● Operational
■ Oil and gas reserves

Gazprom and Rosneft, have so far stayed clear of the initiative, adding to concerns about their compliance with national and international safety standards.

In December 2011, for example, at least 37 people were killed when an oil rig under contract to Gazprom capsized off Sakhalin Island in Russia’s Arctic Ocean, resulting in a fine for the company. And according to Vladimir Chuprov, a Moscow-based energy expert who works for Greenpeace, emergency contingency plans for the Prirazlomnoye oil platform in the Russian Barents Sea, where commercial drilling is to start this year, have not been publicly released, despite being required by Russian regulators.

But even companies with better safety records should avoid the Arctic, say Chuprov and other environmentalists. “In our view no company is ready for offshore oil projects in the Arctic Ocean,” he says. ■

PSYCHIATRY

Diagnosics tome comes under fire

Field tests of new criteria are flawed, critics argue.

BY HEIDI LEDFORD

Diagnoses of certain mental illnesses could rise significantly from next year, say some mental-health experts — but not because of any real changes in prevalence. Instead, the critics blame what they say is a flawed approach to testing the latest version of the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, the standard reference used by researchers and mental-health professionals in the United States and many other countries

to assess patients, inform treatment, design studies and guide health insurers.

Changes to the diagnostic criteria in the fifth edition of the manual, *DSM-5*, due to be published in May 2013 by the American Psychiatric Association (APA) in Arlington, Virginia, have raised concerns that some disorders will be overdiagnosed (see table). Critics say that the analysis of field tests of the new criteria won’t settle those concerns.

Trials of *DSM-5* conducted at 11 academic centres were completed last October. In a

Commentary published in the *American Journal of Psychiatry* (H. C. Kraemer et al. *Am. J. Psychiatry* 169, 13–15; 2012), members of the task force explained that the aim was not to focus on the frequency of a given diagnosis under the proposed *DSM-5* criteria compared with that under the previous criteria. Because there is no accepted prevalence for most psychiatric disorders, they argued, it would be impossible to tell whether a rise in diagnoses reflects a true increase in the sensitivity of the revised criteria or simply a rise in the number of false positives.

That raised the hackles of some researchers, who say that without such comparisons it will be impossible to flag up the possibility that some categories will show an increased prevalence. “It’s a real step back,” says Thomas Widiger, a psychologist at the University of Kentucky in Lexington, who notes that trials of *DSM-IV* were careful to compare old and new diagnostic criteria to see which performed better.

Allen Frances, emeritus professor of psychiatry at Duke University in Durham, North Carolina, led the 1994 *DSM-IV* revision and is an outspoken critic of *DSM-5*. Frances

CONTENTIOUS PROPOSALS FOR DSM-5

Changes to diagnoses of some mental illnesses are causing disquiet about the consequences for patients.

Disorder	Change	Rationale	Reason for controversy
Autism spectrum disorder	Combines multiple <i>DSM-IV</i> diagnoses into one; changes number of criteria needed for diagnosis	Improved specificity of diagnosis	Concerns about underdiagnosis, loss of eligibility for state support
Attenuated psychosis syndrome	New diagnosis	To identify young people at risk for later manifestation of psychotic disorder	Concerns about overdiagnosis/overmedication
Major depressive episode	Removes “bereavement” exclusion	Evidence does not support separating loss of loved one from other stressors	Concerns about overdiagnosis/overmedication
Mild neurocognitive disorder	New diagnosis	To facilitate earlier intervention for individuals in early stages of neurocognitive disorders	Concerns about overdiagnosis/overmedication