Arctic transit – a unique risk matrix





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Reports of decreasing ice levels in the Arctic Ocean are hardly ground-breaking. Climate change has been a global topic for a long time. Yet the prospect of new or more accessible existing Arctic routes has been attracting attention recently. University of California research into climate models for the years 2040 to 2059 has concluded that open-water ships should be able to travel along the Northern Sea Route without the need of icebreaker escort by 2050, saving time and reducing operating costs substantially.

The year 2050 is still a way off; however, shipping and offshore energy operators have a more immediate interest in the region, as demonstrated on 15 May 2013 when the Arctic Council granted observer status to six nations, including China and India. While shorter sea routes are appealing, there are a series of specific regional challenges of which operators, and their P&I clubs, should be aware.

The environment

The harsh environment creates a set of unique operating circumstances for ships, certain types of cargo and crew. Ships, machinery and equipment must be specifically adapted and crews must be appropriately trained. Icing can cause machinery to seize up and ships to be more top-heavy. Melting permafrost, rapid weather changes with relatively sparse weather stations, low temperatures and long nights all have implications for operating procedures and costs.

Remoteness and inadequate local infrastructure can seriously impede the management of incidents such as groundings, pollution, wreck removal, salvage or emergency evacuations, as well as ship repair and bunkering, and suitable ports of refuge.

Communications networks can be limited due to magnetic and solar phenomena, which create serious problems for communications, navigation, search and rescue, access to accurate and up-to-date weather information and weather routing proposals.



The club is keen to continue to support members operating, or members considering future operations, in the Arctic. We are aware of the additional challenges involved in Arctic transit and will continue to monitor the development of best practice guidelines and international codes applicable to the region.

The lack of adequate charts in some parts of the Arctic can create areas of unknown danger for operators who do not maintain their own up-to-date charts. This can create difficulties in preparing voyage feasibility studies. This is most critical in the Canadian Archipelago and the Beaufort Sea.

Political considerations

The Arctic Council is comprised of the eight Arctic states, along with permanent participants and observers. The Arctic Council is the central decision-making body in the region. Jurisdiction over the Arctic is determined primarily on land ownership and is mostly undisputed. All of the Arctic states, with the exception of the US, have ratified the UN Convention on the Law of the Sea (UNCLOS), which regulates rights and responsibilities applicable to the exclusive economic zones, with some states having or claiming jurisdiction over the extended continental shelf and its hidden mineral, oil and gas resources. The environment is a sensitive political issue and policies are changeable. There also remains the simmering issue of the legal status of the Northwest Passage.

Liability regimes

Each of the Arctic states has its own domestic regulatory approaches and liability regimes. There is the potential for future international legislation, such as that proposed by the EU and the Arctic Council, to override national jurisdictions. There are also international standards and regulations to consider, such as the International Maritime Organisation's Polar Code, which is scheduled for implementation by 2014. The Polar Code will create a set of mandatory regulations covering the full range of design, construction, equipment, operational, training, search and rescue, and environmental protection matters relevant to ships operating in waters surrounding the two poles.