

Arctic and North Atlantic conditions bring route risk

Climate change is impacting ice hazards for shipping, freeing up new trade routes in some areas, while increasing the risk of ice in others.



There was another milestone for Arctic shipping in early 2018 when a specially-designed LNG tanker became the first commercial ship to travel the Northern Sea Route in winter and without the assistance of an icebreaker. The Eduard Toll successfully journeyed from South Korea to Montoir, France via northern Russia, shaving around 3,000 nautical miles off the traditional transit via the Suez Canal.

It followed the transit in August 2017 of another specially-designed tanker, the Christophe de Margerie, which became the first merchant ship to sail across the Arctic Ocean without the aid of an icebreaker. It took just 19 days to reach South Korea from Norway, almost a week faster than going via the Mediterranean.

Arctic ice has been thinning and retreating over the past 40 years, bringing new opportunities for shipping, but also serious environmental concerns. Research shows the mean centre of shipping activity moved 300km north and east— closer to the North Pole—over a seven-year span.

As a result, a growing number of vessels are sailing in Arctic waters. For example, cargo volumes on the Northern Sea Route (NSR) increased by nearly 40% to 9.7 million tons in 2017, the biggest annual volume ever, according to the Russian Federal Agency for Maritime and River Transport. This is expected to rise to 40 million tons by 2022, reflecting the development of oil and gas fields, and 70 to 80 million tons by 2030.

“Climate change could open up new shipping routes in the Arctic, such as the North West Passage, and routes across Russia and Canada. These routes will have advantages as well as disadvantages. For example, a collision in a remote hostile environment like the Arctic could prove challenging, and would be a long way away from salvage teams,” says Volker Dierks, head of Marine Hull Underwriting, AGCS Central & Eastern Europe.

Arctic Silk Road

In February 2018, China announced plans for an “Arctic Silk Road” by developing shipping lanes opened up by global warming. China said it would encourage infrastructure development and conduct commercial trial voyages in Arctic waters, with plans to build its first Polar expedition cruise ship by 2019[3].

At the beginning of 2017 the International Code of Safety for Ships Operating in Polar Waters (Polar Code) came into force. The code introduces mandatory requirements for shipping in Polar regions, principally relating to ice navigation, manning and ship design.

Arctic conditions are fast-changing

“The Polar Code continues to be refined,” says Captain Andrew Kinsey, senior marine risk consultant, AGCS. “Arctic conditions are fast-changing and the normal International Maritime Organisation review updates are too slow. For these new shipping routes we need to find faster ways to disseminate information and the lessons of successful transits.”

Ships operating in Arctic waters are bound by the Polar Code, but ice is also posing a significant hazard for shipping elsewhere.

Outside the Arctic and Antarctic, a number of so-called conditional areas also carry a higher risk of ice, including the Gulf of St. Lawrence, Alaska, Sakhalin, Russia and the Baltic Sea. Trading in these areas has also been increasing with global warming.

There is also a threat of ice hazards in more southerly shipping routes from icebergs. At the end of 2017, the US Coast Guard’s International Ice Patrol warned shipping companies that an unusual number of icebergs were drifting into shipping lanes. It found that over 1,000 icebergs had drifted into North Atlantic shipping lanes in 2017, marking it the fourth consecutive season where the danger has been classified as “extreme”.

“Such extraordinary conditions require complementary training for crew, as well as additional routing support,” says Arnaud Gibrais, a senior marine risk Consultant at AGCS, based in Paris.

“A melting Arctic could lead to an increase in icebergs affecting trade routes, although this has not yet been a problem for the major north, south, east or west shipping lanes. But this might become more of an issue in the future,” adds Dierks.

Climate researchers at the University of Manitoba, Winnipeg have also claimed more Arctic sea ice is entering the North Atlantic Ocean, increasing the level of hazard for ships in late spring. Arctic sea ice blocked normally open areas of ocean around Newfoundland in May and June 2017. The ice cover trapped many ships and even sunk some boats when it punctured hulls, the research found.

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