

Arctic meltdown could hurt S'pore

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The Straits Times, 6 July 2009

Global warming due to greenhouse gas accumulations, if expected to be severe worldwide, will be even more keenly felt in the Arctic regions.

The warming predicted by the climate models used by the Intergovernmental Panel on Climate Change in the Arctic over the next 50 years is more than twice the global average and the Arctic will be where the most rapid and dramatic changes will occur during the 21st century.

Already observations confirm that the air temperature has increased at double the rate of the global average over the last 100 years, with the total ice extent decreasing at a rate of 3 per cent to 5 percent per decade.

The Northern Sea Route has never been ice-free, even during the summer months, to allow for significant maritime transportation.

However, the maritime activities along the Northern Sea Route have increased over the last two years. Previously, no non-Russian ships traversed the Northern Sea Route along the Siberian coast.

Now merchant, research and expedition vessels have journeyed through the Northern Sea Route during the summer seasons since 2004 and this volume is set to increase.

The activities seem to indicate that the trans-Arctic passage may open up much quicker than expected. For example, last year, the Arctic Ocean experienced for the first time ever an ice-free and navigable Northern Sea Route along the Siberian coast and suggests that future ice-free passages during the summer months along the Siberian coast is highly likely. Satellite photos seem to also highlight this possibility.

Despite this evidence, current estimates are conservative and tend to vary as to when the Arctic is likely to be ice free during the summer.

For example, the Arctic Marine Shipping Assessment assesses that transit traffic in the Northern Sea Route may be more regular from around 2025 and that regular trans-polar summer transport (four months) may not occur until towards the middle of this century, that is, from 2040 onward.

The National Snow and Ice Data Centre in the United States is even more conservative in suggesting a seasonally ice-free Arctic by 2060.

Despite this prognosis, some Norwegian shipping companies have already embarked on studies which are expected to be completed soon this year on the business cases for trans-Arctic shipping.

The size of ships being examined include 100,000 tonne LNG carriers and up to 5,000 TEU container ships for deployment by 2015. The Japanese have also examined ports that can serve as possible hub ports in northern Japan.

Both seem to indicate an earlier ice-free passage via the Northern Sea Route. The US

National Intelligence Council, in its study on Global Trends 2025, has suggested that the date for a seasonally ice-free Arctic could even be as soon as 2013.

If this is so, tremendous shipping benefits would accrue as transiting the Northern Sea Route above Russia between the North Atlantic and the North Pacific would trim about 5,000 nautical miles and a week's sailing time compared with the use of the Suez Canal and through the Malacca Strait.

This may have an adverse impact on existing regional hub ports like Singapore which sits astride the main east-west transportation thoroughfare and is a major regional transshipment port.

If container ships use the Northern Sea Route, it would make more sense to stop at new or existing ports in Northeast Asia and use these ports as transshipment centres to the South-east Asian region, instead of the port of Singapore.

Some possible ports that could be used in such a manner in North-east Asia may include Hong Kong, Shanghai, or a Japanese port. If this were to occur, the container volumes handled by the port of Singapore may decrease for four months of the year.

Despite the fact that a 'blue' Arctic Ocean is predicted in summertime (four months) to occur from the middle of this century, current rates of warming indicate that this may occur much earlier.

However, even before trans-polar navigation is realised, routes along the coast of Siberia will be navigable much earlier. Already there are plans to build trans-Arctic ships and plans for hub port development in North-east Asia that will take advantage of this ice-free passage.

Such plans indicate that the Northern Sea Route may be opened up for ice-free passage as early as 2013, given current accelerated rates of global warming.

The opening up of the Northern Sea Route will have an adverse impact on the operations of current regional hub ports.

It will also have an impact on the profitability of the current liners operating between Europe and Asia. Both liner and terminal operators, including those in South-east Asia, will have to factor the early opening of the Northern Sea Route into their plans if they are not to be caught off guard.

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