

Russian tanker sails through Arctic without icebreaker for first time

Climate change has thawed Arctic enough for \$300m gas tanker to travel at record speed through northern sea route



The Christophe de Margerie carried a cargo of liquefied natural gas from Hammerfest in Norway to Boryeong in South Korea in 22 days.

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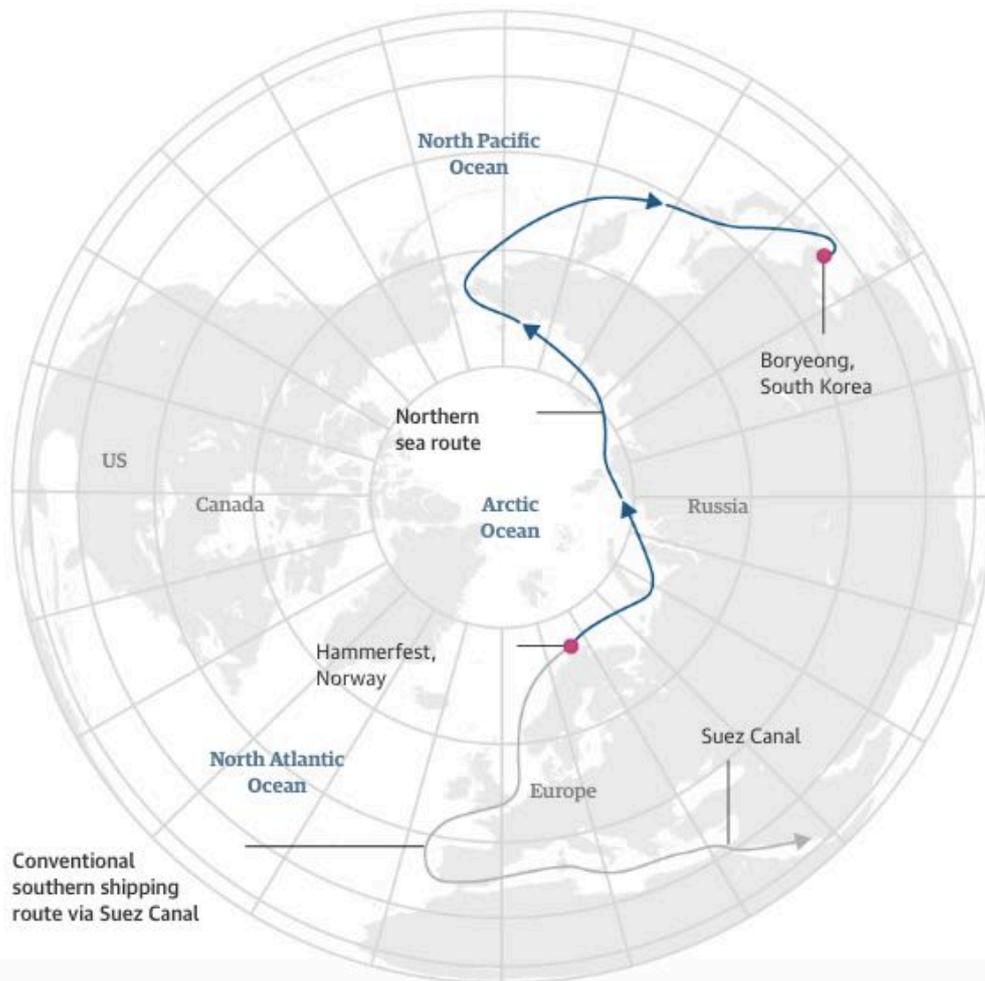
A Russian tanker has travelled through the northern sea route in record speed and without an icebreaker escort for the first time, highlighting how climate change is opening up the high Arctic.

The \$300m Christophe de Margerie carried a cargo of liquefied natural gas (LNG) from Hammerfest in Norway to Boryeong in South Korea in 19 days, about 30% quicker than the conventional southern shipping route through the Suez Canal.

The tanker was built to take advantage of the diminishing Arctic sea ice and deliver gas from a new \$27m facility on the Yamal Peninsula, the biggest Arctic LNG project so far which has been championed by the Russian president, Vladimir Putin.

On its maiden voyage, the innovative tanker used its integral icebreaker to cross ice fields 1.2m thick, passing along the northern sea section of the route in the Russian Arctic in a record six-and-a-half days.

“It’s very quick, particularly as there was no icebreaker escort which previously there had been in journeys,” said Bill Spears, spokesperson for Sovcomflot, the shipping company which owns the tanker. “It’s very exciting that a ship can go along this route all year round.”



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Environmentalists have expressed concern over the risks of increased ship traffic in the pristine Arctic but Sovcomflot stressed the tanker's green credentials. As well as using conventional fuel, the Christophe de Margerie can be powered by the LNG it is transporting, reducing its sulphur oxide emissions by 90% and nitrous oxide emissions by 80% when powered this way. "This is a significant factor in a fragile ecosystem," said Spears.

The northern sea route between Siberia and the Pacific is still closed to conventional shipping for much of the year. But the Christophe de Margerie, the first of 15 such tankers expected to be built, extends the navigation window for the northern sea route from four months with an expensive icebreaker to all year round in a westerly direction.

In the route's busiest year so far, 2013, there were only 15 international crossings but [the Russian government predicts that cargo along this route will grow tenfold](#) by 2020. This link with the Pacific reduces its need to sell gas through pipelines to Europe.

"There has been a steady increase in traffic in recent years," said Spears. "There's always been trade along this route but it's been restricted a lot by the ice. It's exciting that this route presents a much shorter alternative than the Suez route. It's a major saving."

Simon Boxall, an oceanographer at the University of Southampton, said that shipping companies were making a "safe bet" in building ships in anticipation that the northern sea route will open up. "Even if we stopped greenhouse emissions tomorrow, the acceleration in the loss of Arctic ice is unlikely to be reversed," he said.

"We've been able to sail through the north-west passage for several years now but the northern passage, which goes past [Russia](#), has opened up on and off since 2010. We're going to see this route being used more and more by 2020.

"The irony is that one advantage of climate change is that we will probably use less fuel going to the Pacific."

The extent of Arctic ice fell to a new wintertime low in March this year after freakishly high temperatures in the polar regions, and hit its second lowest summer extent last September.



Murmansk's silver lining: Arctic city banks on ice melt for its renaissance

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Murmansk's silver lining: Arctic city banks on ice melt for its renaissance

The largest city in the Russian Arctic expects global warming to change its trading fortunes with the revival of the northern sea route

Murmansk during a 40-day polar night, when the sun barely rises. Photograph: Shaun Walker for the Guardian

Shaun Walker in Murmansk

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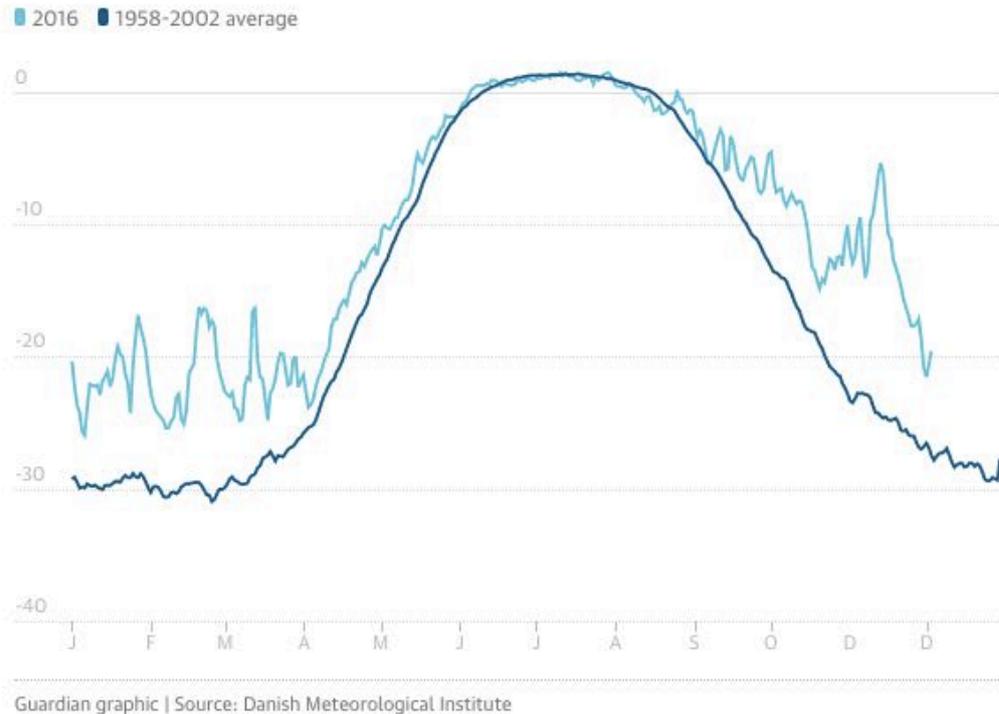
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t's noon in [Murmansk](#), but the sky is dark. Chunky silhouettes can just be made out scurrying along Lenin Street, swaddled in furs. This is a polar night, and it will be more than a month before anyone here sees the sun again.

When the [Soviet Union collapsed](#), this city – by far the world's largest settlement within the Arctic Circle – went into steep decline, its population tumbling from nearly half a million to barely 300,000.

Now, however, many here are anticipating a renaissance, driven by the Kremlin's belief in the [strategic importance of the Arctic](#), and melting Arctic ice caused by global warming.

The principal hope revolves around the [northern sea route](#), a passage through the Russian Arctic from Murmansk in the west to [Kamchatka](#) in the east. West to east journeys are one-third shorter via this transit route than through the Suez Canal. It will also be used to transport the vast oil and gas resources in the Russian Arctic to internal and international markets. Currently a nuclear icebreaker is needed to accompany vessels travelling along the route, but as the ice melts – and it's melting fast – that could change.



“We have all the conditions here to become a major international hub,” said Vasily Osin, the region’s acting transport minister. He said a major project to renovate Murmansk’s port would be completed in the coming years, and Moscow has announced a programme to construct or renovate 10 ports in the Russian Arctic in order to facilitate a revival of the northern sea route.

Murmansk was founded in 1916 in the twilight of the tsarist empire, and was developed as the Soviet gateway to the Arctic, mainly due to the year-round ice-free port. The frigid temperatures that would be expected at this latitude are tempered somewhat by the last whispers of the Gulf Stream, and the city has always experienced unpredictable weather – it can rain in January and snow in July. This had led many locals to be sceptical of global warming as a phenomenon – indeed many dismiss it as a western myth.

But there is no doubt that something is changing. Satellite pictures show record low ice levels, and navigation is becoming possible for longer periods.

“Three years ago boats could only go out into the Kara Sea in the end of July, but this year it was in the middle of July,” said Maxim Belov, a member of the regional parliament and the chair of its economics committee.

Belov, 35, is a fourth-generation Murmansk resident, innately hardy to the conditions dictated by the latitude. He dreams of a time when an Arctic region of newly built ports might assure easy passage for thousands of transit ships.

“Of course, it’s a matter of 10 to 15 years away, but the more shipping companies realise that there are these big savings to be made, maybe they’ll think it doesn’t cost that much more to equip their vessels to make them ice-class.”

For now, traffic on the route is a trickle – a fraction of the levels at the end of the Soviet Union. In 2011, Putin gave the northern sea route his backing, predicting that with time it would become “an international transport artery that will rival traditional trade lanes in service fees, security and quality”.

Putin has also stepped up [Russian military activity](#) in the Arctic, renovating a series of Soviet-era military bases in the region.

Now [Russia](#) is building new icebreakers, the first of which, the Arktika, will come online next year and at 173 metres long will be the biggest in the world and capable of tackling ice up to three metres thick.



The evacuation of the drifting scientific seasonal station the North Pole on the Captain Dranitsyn ice breaker, August 2015 in Murmansk region, Russia. Photograph: Alexander Petrosyan/Kommersant/Getty Images

The warming Arctic should also theoretically improve conditions for oil and gas exploration, though here both the economics and ethics are on shakier ground.

In the short term, with falling oil prices and US sanctions on Russia, many of the difficult-to-access Arctic resources have begun to look less attractive in the past few years.



Arctic ice melt 'already affecting weather patterns where you live right now'

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For years, the Shtokman gas field, one of the world's biggest, was seen as the potential future driver of the region's growth. [Norway's Statoil](#) dropped out of the project in 2013 and French Total followed suit last year. Shtokman is one of the largest gas deposits in the world, but accessing it in Arctic conditions requires technological breakthroughs and appears unlikely to be profitable any time in the near future.

Currently the largest scale natural resource project in the Russian Arctic is a liquefied natural gas plant at Sabetta, in the estuary of the Ob river. It is due to come online next year, with gas shipments going along the northern route to [Europe](#).

But ice melt has prompted warnings from environmentalists about the perils of prospecting for hydrocarbons in the Arctic.

Vadim Krasnopolsky, oil and gas projects coordinator at WWF, says that global warming and reduced polar ice may not be entirely positive news for shipping in the area.

“For the next decades, there’ll definitely be ice in the Arctic, and even if the ice melts more, this can lead to moving ice sheets, and icebergs. Also, in the last decade, the number of dangerous weather situations doubled. Even if the temperatures warm up, it’s still the Arctic,” he said.



Murmansk was developed in 1916 as the Soviet gateway to the Arctic due to its year-round ice-free port. Photograph: Lev Fedoseyev/Getty Images

Life in Murmansk is not easy. In common with the Soviet-subsidised economy, Russian law provides benefits for those people who live in the far north, to compensate for the hardships of climate and latitude. State workers are paid significantly more than their counterparts in other parts of Russia. Statutory holiday days are also higher, and every resident receives a free return plane ticket once every two years to take a holiday somewhere warmer within Russia’s borders.



Russian Arctic city hopes to cash in as melting ice opens new sea route to China

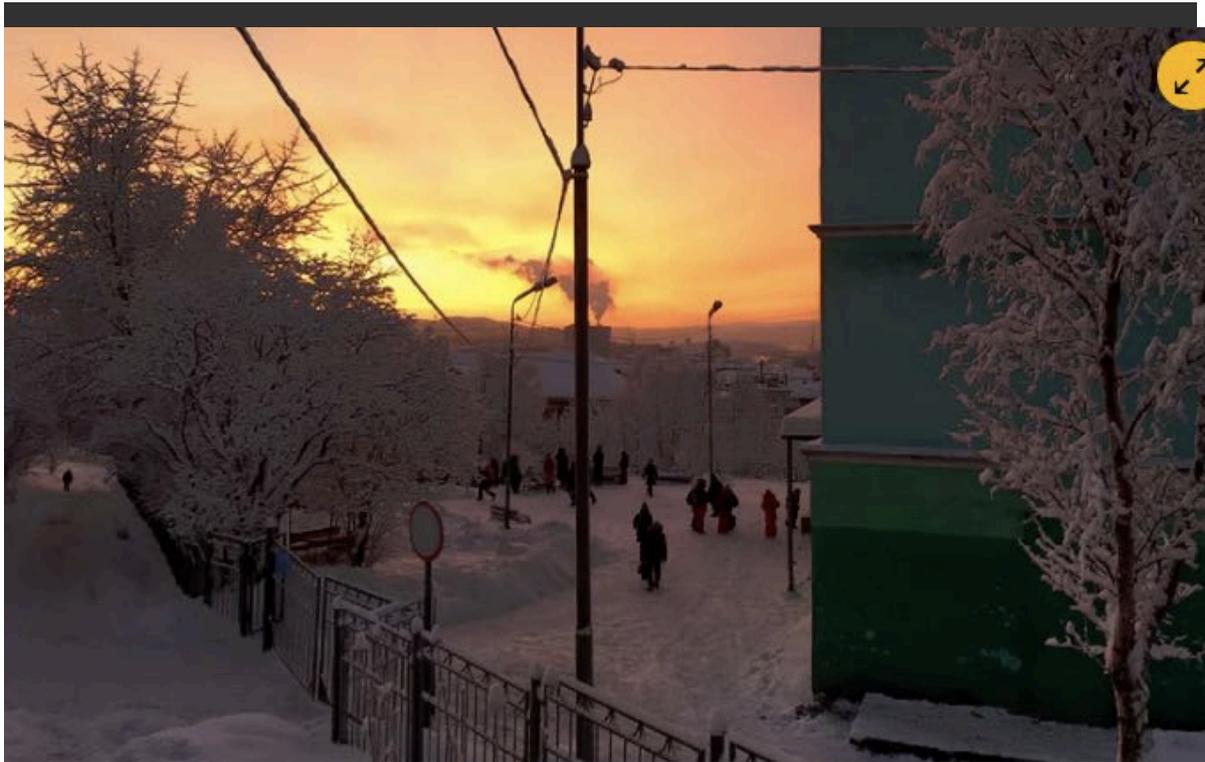
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In summer, the town experiences a polar day of nearly two months, during which the sun never sets, while in winter, a polar night lasts 40 days. On clear days at both ends of the 40-day polar night, there is at least a three-hour period when the sun lurks just below the horizon, in which orange streaks light up the sky and the snowy cityscape gently glows with an ethereal pinkish hue. On overcast days closer to the winter solstice, there is merely an hour or two of grimy twilight around one in the afternoon.

Some in Murmansk say polar nights are a breeze compared with a polar day, when the round-the-clock sunshine leads the body to produce endless stocks of serotonin, leading to insomnia and burnout.

But for all the climatic difficulties, Murmansk is a place to which its residents grow strangely attached, and as in other parts of the extreme Russian north, people display a warmth and friendliness not always seen in other parts of the country.

“We don’t have sunshine, so we have to warm each other up with smiles,” said Irina Ryabakova, a teacher.



Lunchtime at a school in Murmansk during a polar night in December. Photograph: Shaun Walker for the Guardian

During the oil boom of the first Putin decade wealthtrickled down to cities such as Murmansk. While much of the city’s housing stock has been battered by time and climate, there are new shopping malls and multiplex cinemas, and a brand new philharmonic hall opened in November. High-concept restaurants serve Arctic treats including grilled reindeer tongue and ice-cream made with local seaweed. And while many people are keen to leave Murmansk, they often end up returning.

“I wanted to leave, I even bought a flat in Voronezh [in central Russia], but then I spent some time there, and realised the people are so different, and decided I couldn’t leave here,” said Marina Myzheritskaya, a Murmansk-based psychologist.

The odds might be stacked against Murmansk, but Russia has an almost visceral attraction to the Arctic and a desire to resurrect the area economically and militarily, whatever the costs. A monument to “the conquerors of the Arctic” in central Murmansk takes in a range of dates, from Vitus Bering’s great northern expedition from 1733-1742, through Valery Chkalov’s solo flight over the north pole in 1937, to Artur Chilingarov’s 2007 north pole mission, during which the Russian flag was [demonstratively placed](#) on the seabed under the pole.

“I love the Arctic and I believe in the Arctic,” said Belov. “We have to make sure life in Murmansk flourishes.”