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Warming Revives Dream of Sea Route in Russian Arctic

By **ANDREW E. KRAMER**

ARKHANGELSK, Russia — Rounding the northernmost tip of Russia in his oceangoing tugboat this summer, Capt. Vladimir V. Bozanov saw plenty of walrus, some pods of beluga whales and in the distance a few icebergs.

One thing Captain Bozanov did not encounter while towing an industrial barge 2,300 miles across the Arctic Ocean was solid ice blocking his path anywhere along the route. Ten years ago, he said, an ice-free passage, even at the peak of summer, was exceptionally rare.

But environmental scientists say there is now no doubt that **global warming** is shrinking the Arctic ice pack, opening new sea lanes and making the few previously navigable routes near shore accessible more months of the year. And whatever the grim environmental repercussions of greenhouse gas, companies in Russia and other countries around the Arctic Ocean are mining that dark cloud's silver lining by finding new opportunities for commerce and trade.

Oil companies might be the most likely beneficiaries, as the receding polar ice cap opens more of the sea floor to exploration. The **oil giant Exxon Mobil recently signed a sweeping deal** to drill in the Russian sector of the Arctic Ocean. But shipping, mining and fishing ventures are also looking farther north than ever before.

"It is paradoxical that new opportunities are opening for our nations at the same time we understand that the threat of carbon emissions have become imminent," Iceland's president, Olafur Ragnar Grimsson, said at a recent conference on Arctic Ocean shipping held in this Russian port city not far south of the Arctic Circle.

At the same forum, Prime Minister Vladimir V. Putin of Russia offered a full-throated endorsement of the new business prospects in the thawing north.

"The Arctic is the shortcut between the largest markets of Europe and the Asia-Pacific region," he said. "It is an excellent opportunity to optimize costs."

This summer, one of the warmest on record in the Arctic, a tanker set a speed record by crossing the Arctic Ocean in six and a half days, carrying a cargo of **natural gas** condensate. The previous record was eight days.

Scientists say that over the last 10 years the average size of the polar ice sheet in September, the time of year when it is smallest, has been only about two-thirds the average during the previous two decades. The **Arctic Monitoring and Assessment Program**, a Norwegian group studying the Arctic, forecasts that within 30 or 40 years the entire Arctic Ocean will be ice-free in the summer.

And so business plans are being drawn up to capitalize on changes in a part of the world that for much of seafaring history was better known for grim final entries in diaries of explorers like Hugh Willoughby of England. He died with his crew in 1553 trying to navigate this shortcut from Europe to Asia, known as the Northeast Passage.

The Russians, by traveling near the coast, have been sailing the Northeast Passage for a century. They opened it to international shipping in 1991, after the breakup of the Soviet Union. But only recently have companies begun to find the route profitable, as the receding polar ice cap has opened paths farther offshore — allowing larger, modern ships with deeper drafts to make the trip, trimming days off the voyage and saving fuel.

In 2009, the **first two international commercial cargo vessels** traveled north of Russia between Europe and Asia. This year, 18 ships have made the now mostly ice-free crossing.

The voyages included a scenic cruise through the Northeast Passage, departing from Murmansk and arriving in Anadyr, a Russian port in the Pacific Ocean across the Bering Sea from Alaska. “The voyage offered attractions such as abandoned Russian polar stations,” the Australian operator, Aurora Expeditions, noted in its promotional literature.

On some routes, the trip over the top of Russia is now competitive with the passage from Europe to Asia via the Suez Canal. The voyage from Rotterdam to Yokohama, Japan, via the Northeast Passage, for example, is about 4,450 miles shorter than the currently preferred route through the Suez, according to Russia’s Transportation Ministry. (Of course, the Arctic route has a way to go before catching up to the 18,000 ships a year sailing through the Suez Canal.)

But the primary use of Arctic Ocean shipping has been to support other industries heading farther north, like mining and oil drilling, according to participants at the Russian conference.

Tschudi, a Norwegian shipping company, has bought and revived an idled iron ore mine in the north of Norway to ship ore to China through the Northeast Passage. The voyage to Lianyungang in China took 21 days in 2010, compared with the 37 days typically required to sail to China through the Suez. Tschudi executives estimate they save \$300,000 a trip.

“Very few people in the shipping community know about this route,” Felix Tschudi, the chairman, said in an interview.

The Russian company Norilsk’s nickel and copper mine can now ship its metals across the Arctic Ocean without chartering ice breakers, as in the past, saving millions of rubles for shareholders. In northwest Alaska, the [Red Dog](#) lead and zinc mine moves its ore through the Bering Strait, which is less often clogged with packed ice than in past decades.

Citigroup’s Moscow office has identified five Russian companies as well positioned to benefit from global warming in the north, where temperatures are rising about twice as fast as the global average.

Besides Norilsk, they included Sovcomflot, the state shipping company, and the nation’s two largest natural gas companies, Gazprom and Novatek. The fifth is Rosneft, the state oil company that has entered the joint venture with Exxon Mobil to drill in the Kara Sea, a part of the Russian sector of the Arctic Ocean. Russia is retooling a military shipyard outside Arkhangelsk that built the Soviet Union’s nuclear submarines to make ice-capable oil and gas drilling platforms.

For the international fishing industry, the target is the so-called Arctic Ocean doughnut hole — the millions of square miles in the ocean’s center that are beyond the 200-mile exclusive economic zones of the coastal nations. Until 2000, the entire doughnut hole was frozen year round. Now, large portions north of Alaska and eastern Siberia are usually ice-free in the summer.

The specter of hungry southern nations fishing the newly navigable doughnut hole prompted a recent [report by the Pew Environment Group](#) to warn that without a new set of regulations for the region, Arctic [cod](#) populations might be decimated.

Meanwhile, because ice floes still menace shipping even in the otherwise open sea lanes, authorities in the United States, Russia and Norway are studying the business potential of overhauling ports on both sides of the Northeast Passage to transfer containers from ordinary freighters to ice-class vessels that would ply the Arctic Ocean, serving Asia, Canada, the United States West Coast and Europe.

Under this plan, now hopelessly remote ports like Kirkenes in Norway or Adak in Alaska, south of the Bering Strait, might be transformed into bustling logistics hubs for Arctic shipping.

Alaska's lieutenant governor, Mead Treadwell, was among those who attended the Russian conference. He noted that about \$1 billion worth of goods passed through the Bering Strait last year. "The ships," he said, "are coming."