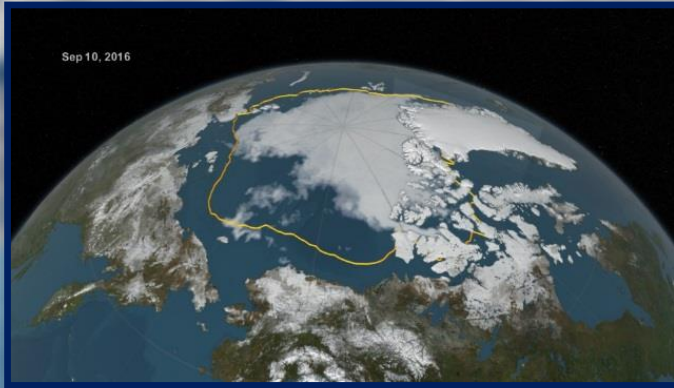
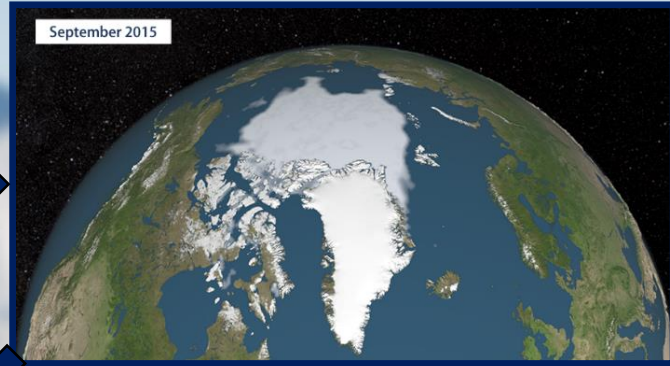


Sino-Russian Collaboration in the High North

Dr. James A. Boutlier
Sixth Asian Maritime Security Forum
14-15 November 2018
Haikou, Hainan, People's Republic of China

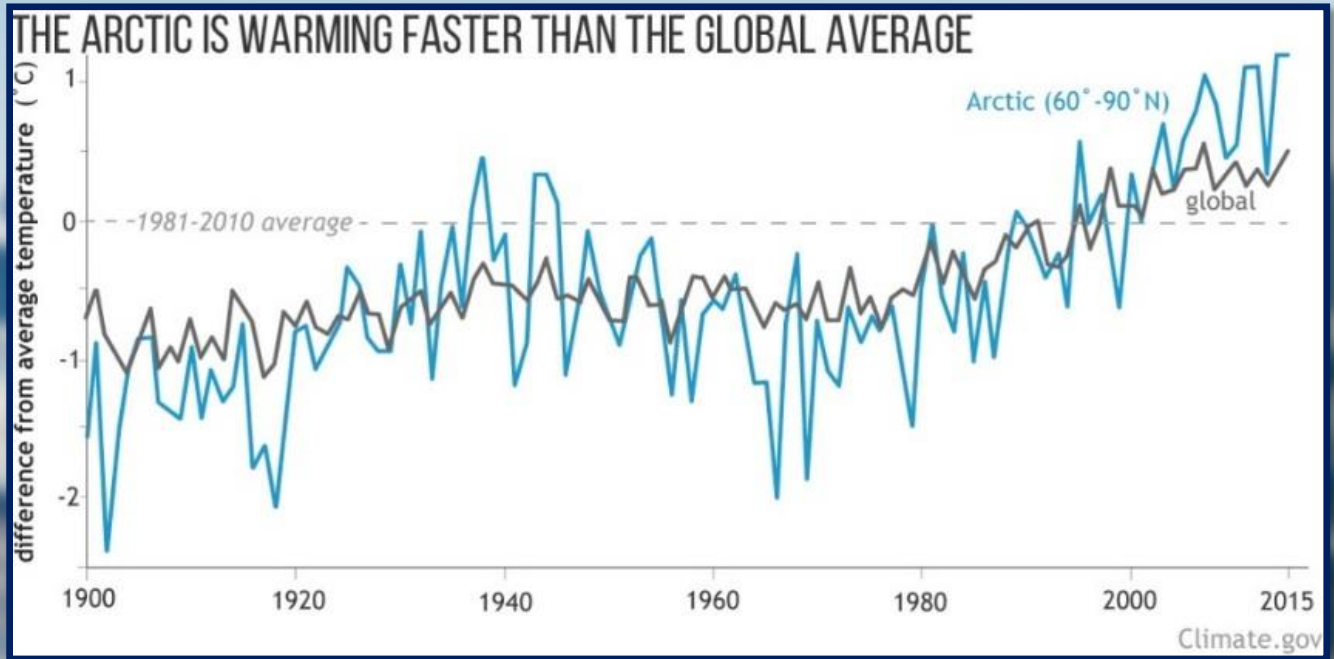


The Arctic Heats Up



- Polar ice has shrunk greatly over past 30 years, opening up the Arctic.
- Multi-year ice in particular has greatly decreased.

And It's Going to Get Hotter



- The trend of global warming is more pronounced in the Arctic than elsewhere in the world.
- Feedback loops suggest this trend will accelerate, with serious regional and global implications.

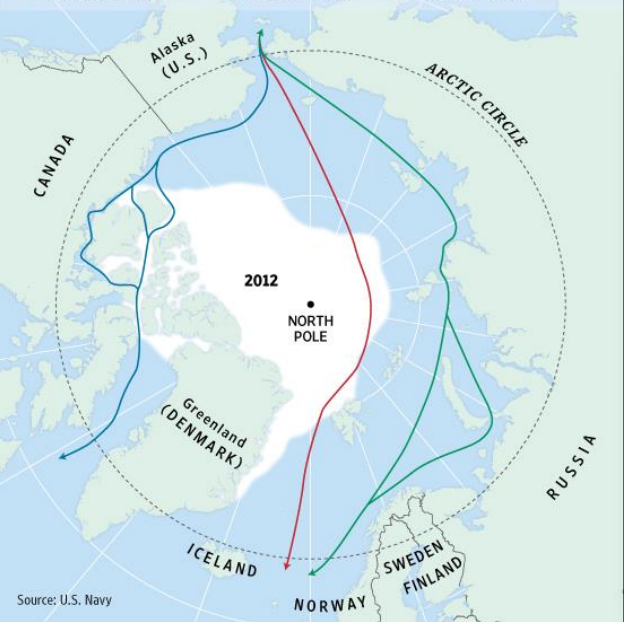
New Routes:

Northern Sea Route & Northwest Passage

- The Northern Sea Route in particular promises significant time and cost savings.

ARCTIC SHIPPING ROUTES

→ Northwest Passage → Transpolar route → Northern Sea route



China's New Shipping Frontier

How the new Northern Sea route compares to the traditional Suez Canal route

NORTHERN SEA ROUTE

Travel time
35 days
Dangers
Icebergs
Travel window
July to November
Container-carrying vessels
One this year

SUEZ CANAL ROUTE

Travel time
48 days
Dangers
Access to Suez Canal under question with upheaval in Egypt
Travel window
Year-round
Container-carrying vessels
17,000 last year

Sources: Northern Sea Route Information Office; National Snow and Ice Data Center; Cosco; Howl's List

The Wall Street Journal



Yamal's LNG Riches



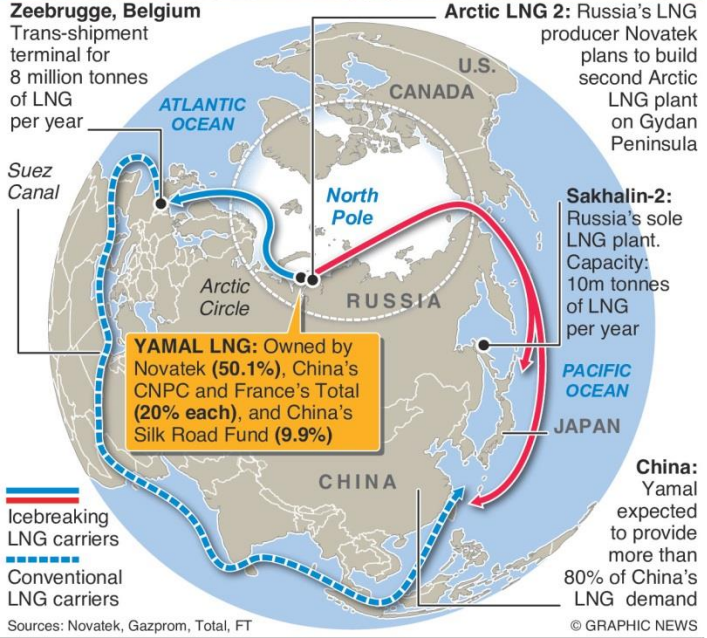
- Yamal is the largest jewel in Russia's fossil fuels crown, with estimated reserves of 300 billion cubic metres of natural gas.
- China is deeply invested in Yamal operations, providing 60% of funding for the initial LNG stages.

Russia launches Yamal gas super project

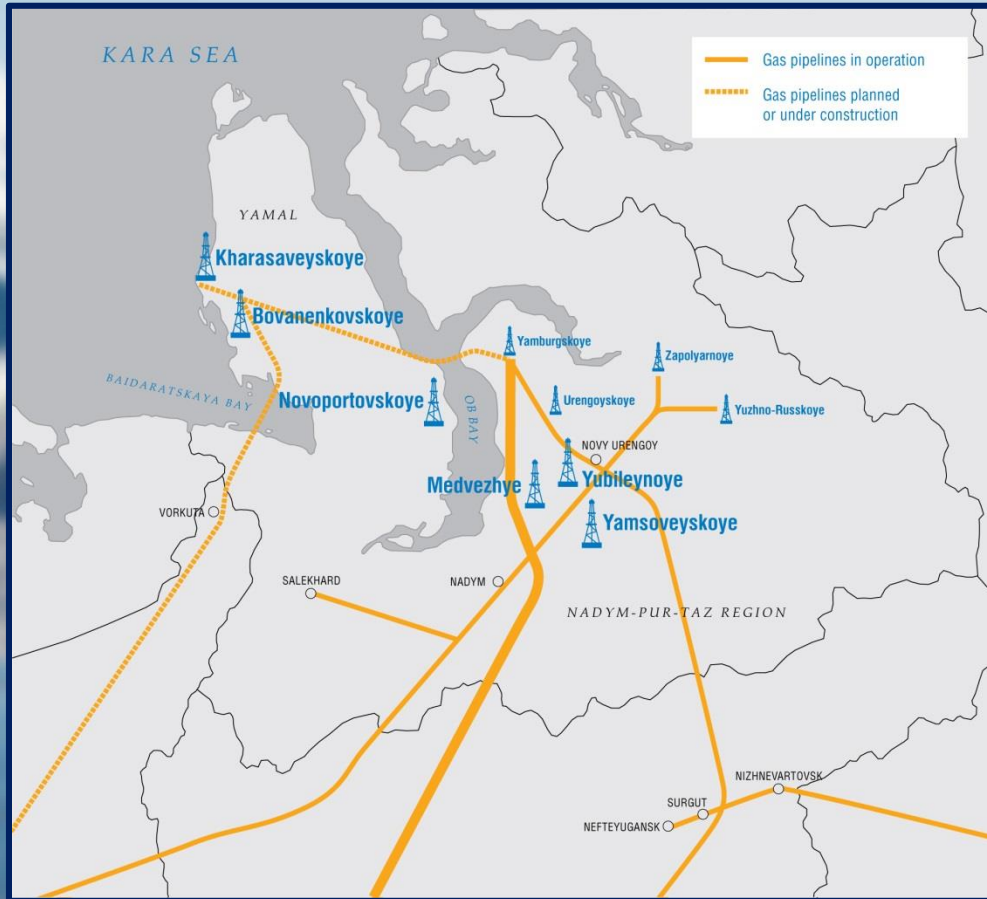
Russia's Yamal project aims to produce 16.5 million tonnes of liquefied natural gas (LNG) a year, delivered to Europe and Asia by 15 purpose-built ships capable of breaking through two-metre-thick Arctic ice

ARC7 tankers: Length: 229m, breadth: 32.5m, capacity: 172,600m³, cost: \$316 million each

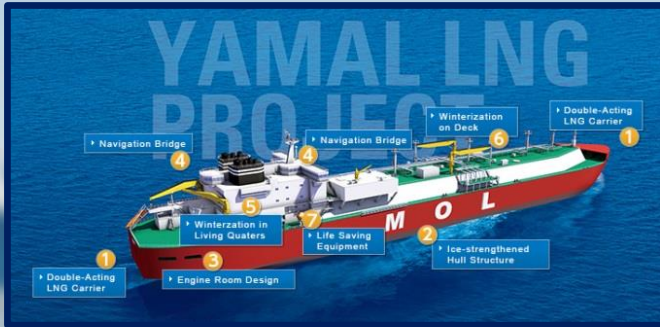
Built by South Korea's Daewoo, tankers will cut 10 days off current 25-day journey



Yamal Gas



New Arrivals



Daewoo's LNG tanker concept

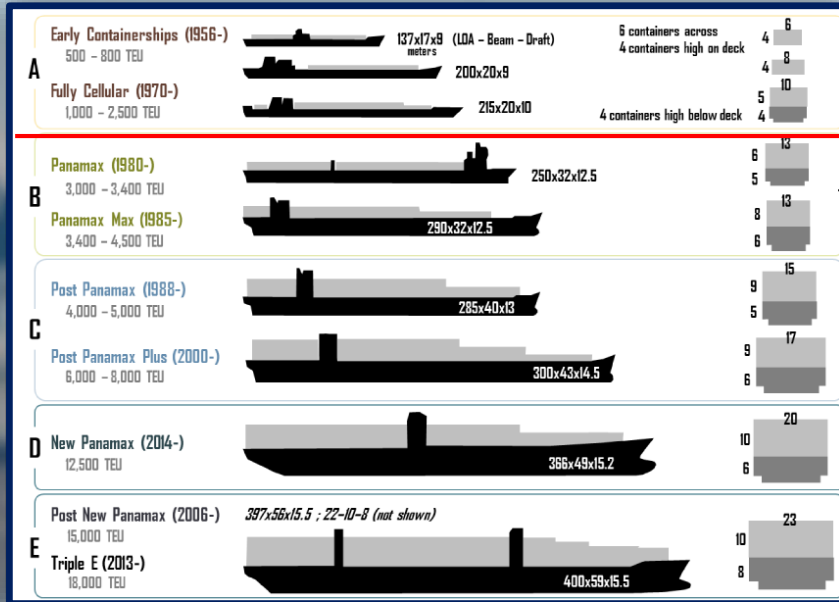


Daewoo's *Christophe de Margerie* alongside in Yamal



China's *Xue Long* icebreaker

A Splash of Cold Water



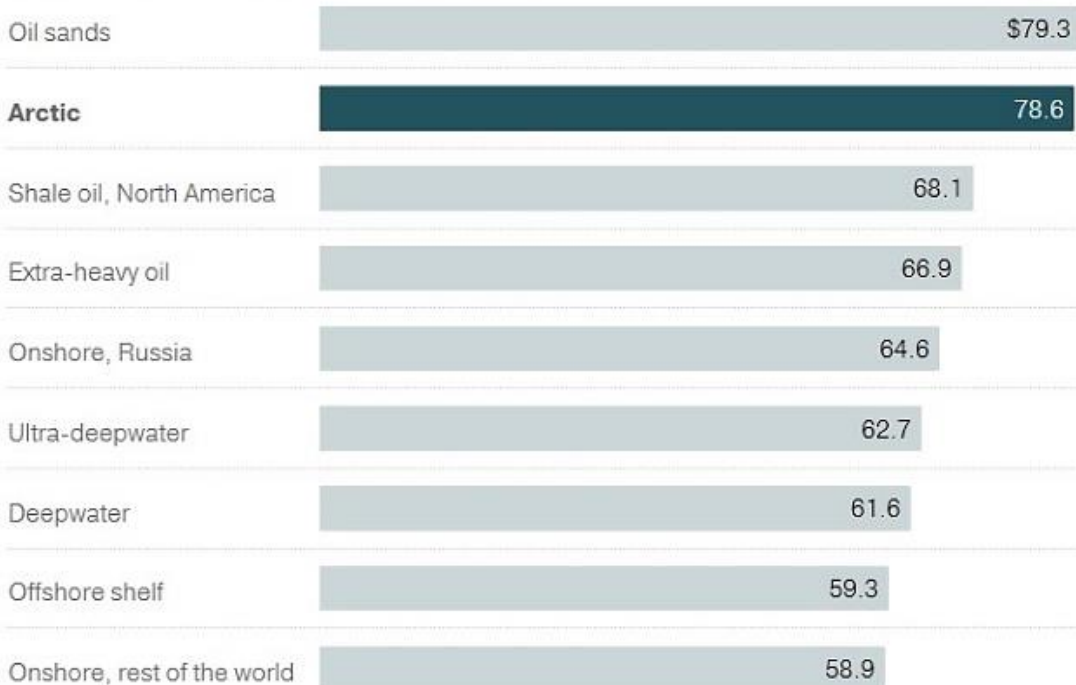
- *Venta Maersk*, a Baltic feeder, is in the Panamax class.

- Commercial shipping relies on just-in-time reliability, stability, and economies of scale, which the Arctic will not provide for many years.
- Shipping of resources out of the Arctic is much more likely than transits all the way through the NSR or NWP.

Break-even price of known but undeveloped oil reservoirs

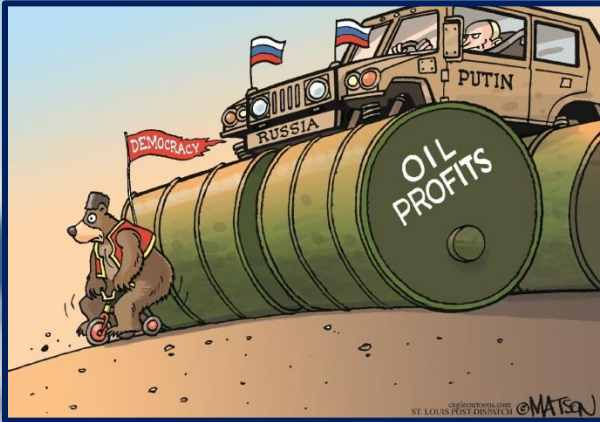
Per barrel, October 2015

The price of oil in December 2015 was \$37 per barrel.

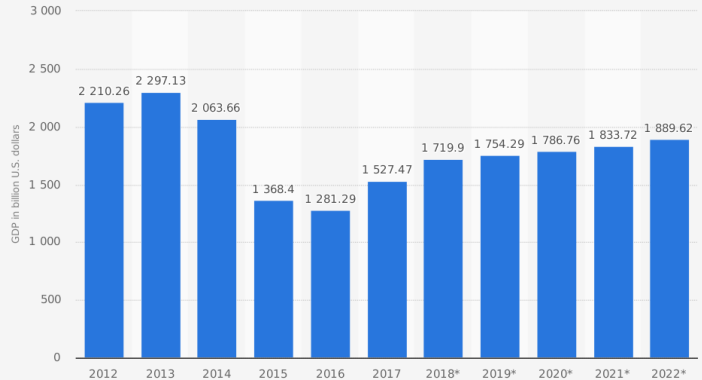


- The challenges of producing in such a difficult environment, along with less costly sources elsewhere, make Arctic resources less attractive.

Russian Economy



Russia: Gross domestic product (GDP) in current prices from 2012 to 2022 (in billion U.S. dollars)



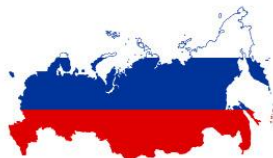
Source:
IMF
© Statista 2018

Additional Information:
Russia: IMF

Texas

vs.

Russia



POPULATION (2018): **29.3 MILLION**

POPULATION (2018): **144 MILLION**



GROSS DOMESTIC PRODUCT (2018):
\$1.70 TRILLION

GROSS DOMESTIC PRODUCT (2018):
\$1.28 TRILLION



GDP PER CAPITA: **\$58,028**

GDP PER CAPITA: **\$8,735**













Source: World Bank, United Nations, Texas Health and Human Services Commission, U.S. Global Investors

- The current Russian state is deeply dependent on oil and gas revenues to stay afloat.
- For all its posturing, when placed in context, Russia is actually quite weak.

Vostok 2018

Military might

Troops and hardware deployed

 Russia	 China
 300,000 soldiers	 3,200 soldiers
 36,000 tanks/armoured vehicles	 900+ combat vehicles
 1,000 aircraft	 6 Fixed-wing fighter jets
 80 warships	 24 Military helicopter

Source: China's Ministry of Defence, state media



- The Vostok 18 exercise, with 303,200 troops, 1,006 planes, and 80 warships allegedly participating, was a grand show of Sino-Russian cooperation and strength.
- Moscow may have been signaling European - not Asian - states with Vostok 18.

A large, white iceberg with a jagged, multi-faceted top is the central focus, floating in a dark blue sea. The sky is a clear, pale blue. In the foreground, the water is filled with smaller, broken pieces of ice and white foam. The word "Questions?" is written in a bold, dark blue, sans-serif font, centered over the middle of the image. A semi-transparent light blue horizontal bar is positioned behind the text.

Questions?