

Maritime Security Challenges 2016

Victoria, British Columbia

5 October, 2016

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Norfolk, VA

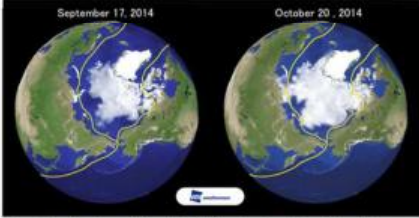
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Northern Sea Route Transit Applications Hit Record High in 2014

October 28, 2014 by Mike Schuler



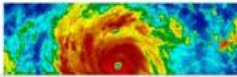
Comparison of lowest recorded ice extent of 2014 and current conditions. NSR route is seen on the left. Image credit: Weathernews

The Northern Sea Route of the Northeast Passage saw a record number of applications for permits to sail the famed arctic route in 2014, while sea ice extent prevented the Northwest Passage from opening up for the first time in five years, according to new data from Weathernews Inc.'s Global Ice Center.

In their annual 2014 report, Weathernews notes that this year the Northeast Passage fully reopened in late August and stayed open for six weeks, until closing October 3. Diverse's Northern

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Northern Sea Route traffic plummeted



Cargo transport along the Northern Sea Route is down 77% compared to 2013. (Photo: Alamy)

After four years of increased use of the Northern Sea Route by vessels going in transit between Europe and Asia, 2014 saw a steep downturn. The amount of cargo transported in transit dropped 77 percent compared to last year.

By Trade Petterson
December 16, 2014

Only 274 000 tons of cargo was shipped in transit along the NSR this sailing season, website [ECHOED](#) reports. This is a steep downturn compared to 2013, when a

Related

Third Arctic search and rescue center

More from Arctic

- Russian Arctic scientists to be evacuated from ice floe**
An icebreaker sailed from Murmansk yesterday to pick up 17 scientists who have spent four months on an ice floe near the North Pole.
August 09, 2014
- Russia ready to talk with Denmark over North Pole**
It might take up to 15 years to settle the Arctic delimitation issue, the Russian Foreign Ministry says.
August 05, 2014
- Ice-free Arctic summers expected by 2050s**
Improved computer simulations suggest that the Arctic will see its first ice-free summer in 2050, a decade earlier than previously projected.
August 05, 2014

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First container ship on Northern Sea Route



Chinese shipping major Cosco has majord plans for shipments along the NSR. (Photo: Coscon.fr)

The "Yong Sheng" is the first ever container-transporting vessel sailing transit along the Northern Sea Route

By Atle Staalesen
August 21, 2013

When arriving in Amsterdam, presumably on September 11, the 19,000-ton vessel "Yong Sheng" will get its place in the history books as the first container-transporting vessel which made it transit along the Arctic shortcut between Asia and Europe. The vessel, operated by China's state-controlled Cosco Group, left a Chinese port on August 8 and is currently on its way towards the eastern part of the Russian Arctic.

According to Cosco, Asian goods could in few years be transported through the northern passage in significant volumes, the [Wall Street Journal](#) reports.

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China starts commercial use of Northern Sea Route

More from Arctic



More research and international cooperation needed in the

Arctic

REYKJAVIK: The climatic changes taking place in the Arctic are a call to action for the world. We must answer with more international cooperation and more research, says Tore Hattrem, State Secretary of Norway's Foreign Ministry.

August 27, 2016



Our Arctic policy is transparent

"Partnership should and shall shape the

development of the Arctic, therefore cooperation is the starting point for our Arctic policy."

Vladimir Barbin, Senior Arctic Official and representative to the Arctic Council, said at the Arctic Circle 2015 assembly.

August 27, 2016



Northern Sea Route - focus on domestic projects

REYKJAVIK: Transit cargo

between Europe and Asia plummets, but cargo to and from Russian ports along the Northern Sea Route is increasing considerably, Deputy Minister of Transport Olersky says..

October 18, 2015

Partners



Yong Sheng



“Of the 18 vessels going transit on the NSR in 2015, ten were Russian, two were Chinese, one Dutch and one Swedish. The Chinese general cargo carrier «Yong Sheng», which shipped twice along the route, alone accounted for more than 75 percent of the 2015 NSR cargo”

<http://www.thebarentsobserver.com/industry/2016/02/historical-low-northern-sea-route>

Name: *MSC Oscar*
Owner: [Mediterranean Shipping Company](#)
Operator: [Mediterranean Shipping Company](#)
Completed: 2015

General characteristics

Type: [Container ship](#)

Tonnage: 197,362 [DWT](#)

Length: 395.4 m (1,297 ft)

Beam: 59 m (194 ft)

Draught: 16m





Maersk Triple E

Type: [Container ship](#)

Tonnage: 165,000 [DWT](#)

Displacement: 55,000 tonnes (empty)^[1]

Length: 400 m (1,312 ft)

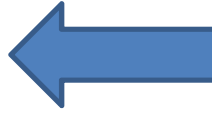
Beam: 59 m (194 ft)

Draft: 16 m (52 ft)





This does not carry global international trade on any scale



This does





50 Let Pobedy (50 лет Победы)

Length: 159.60 m (523 ft 7 in)

Beam:

- 30 m (98 ft 5 in) (max)
- 28 m (92 ft) (waterline)

Containership beams

Panamax – 32 meters

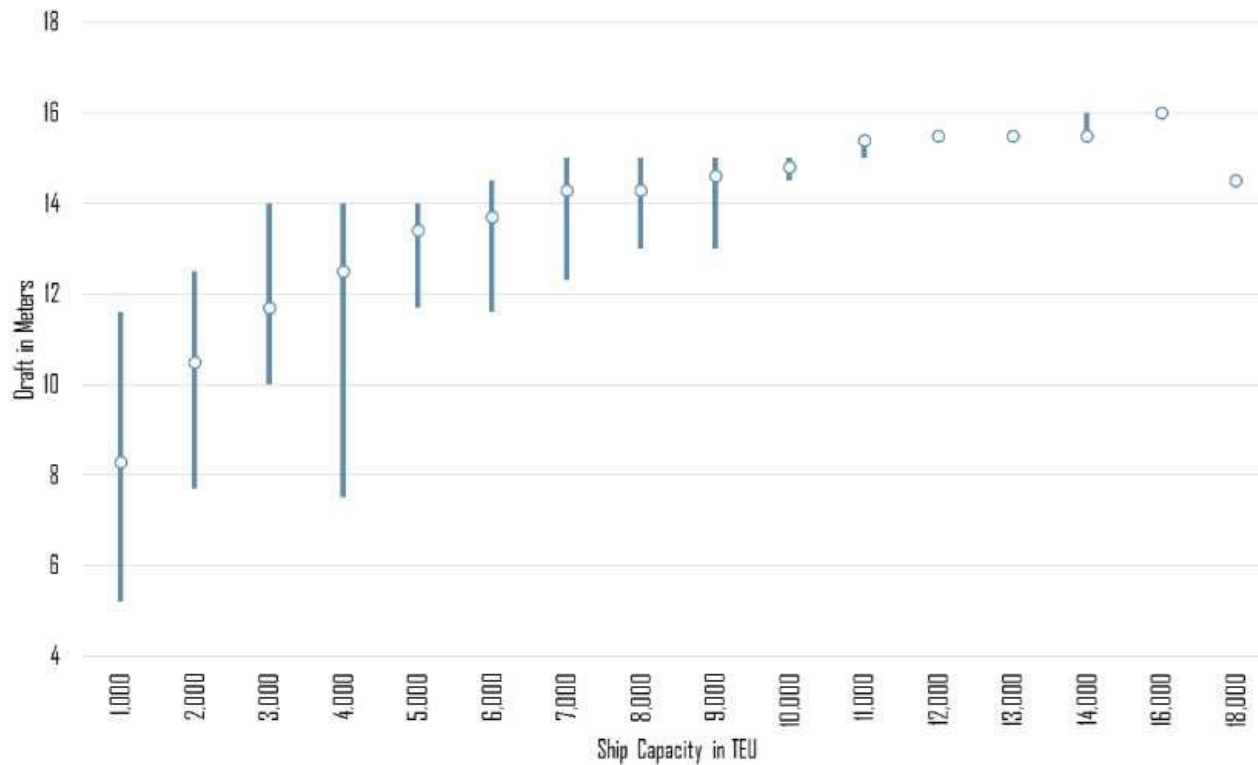
Post panamax – 49 meters

Super Post Panamax – 56 meters

19,000+ teu – 59 meters

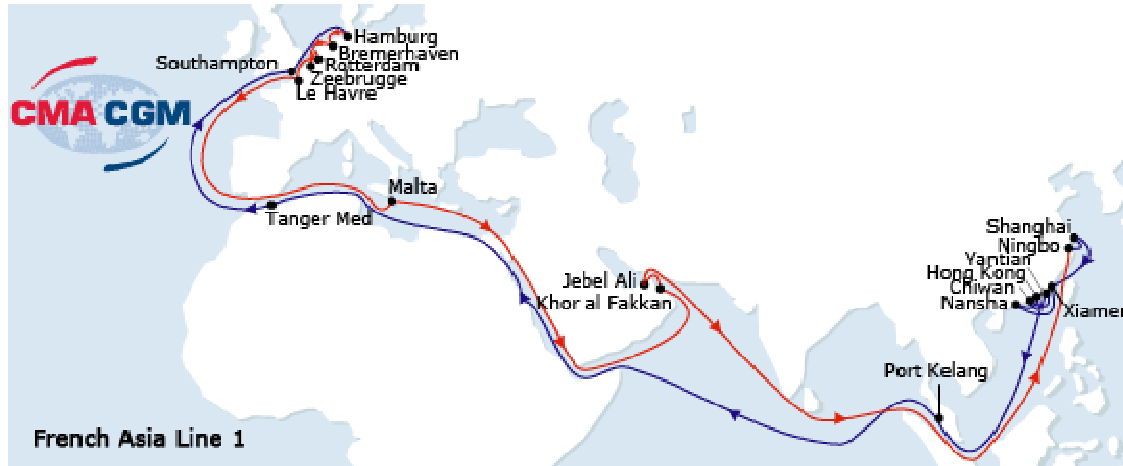


Draft is also an issue: Max draft on the NSR – 12.5 meters



Source: Adapted from Clarkson Research

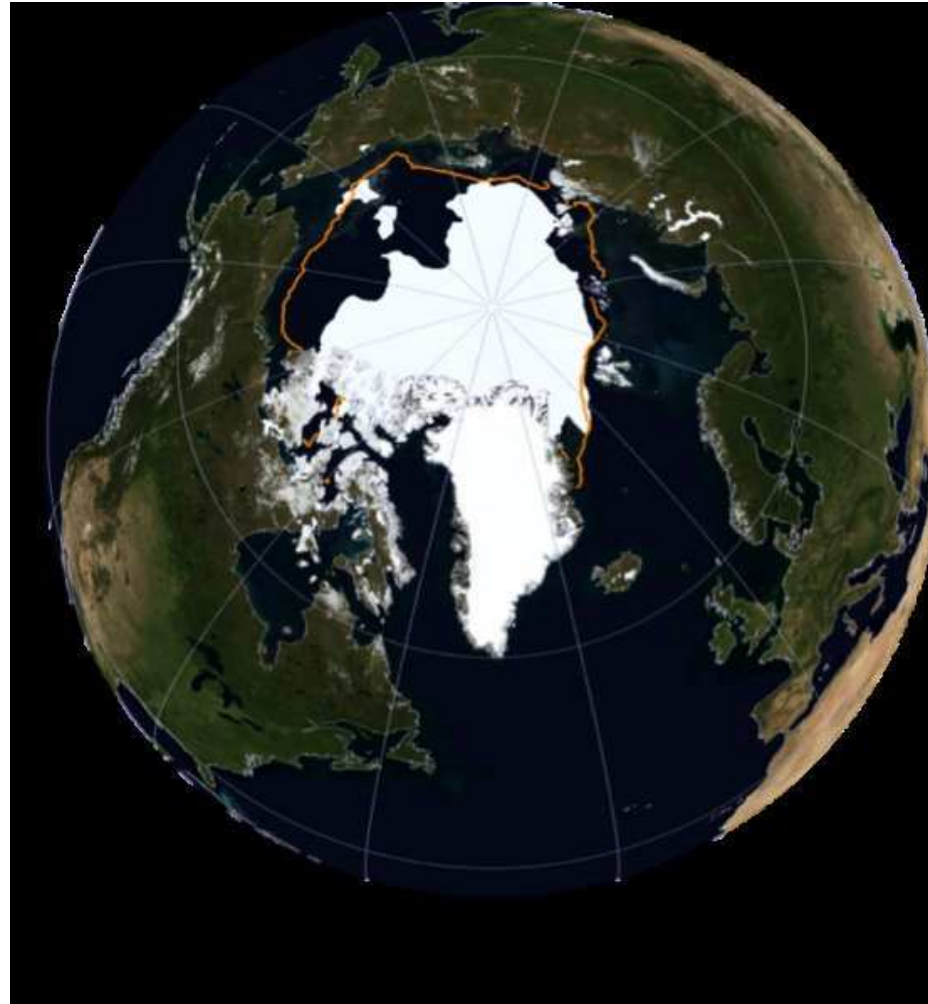
https://people.hofstra.edu/geotrans/eng/ch3en/conc3en/containership_draft_size.html

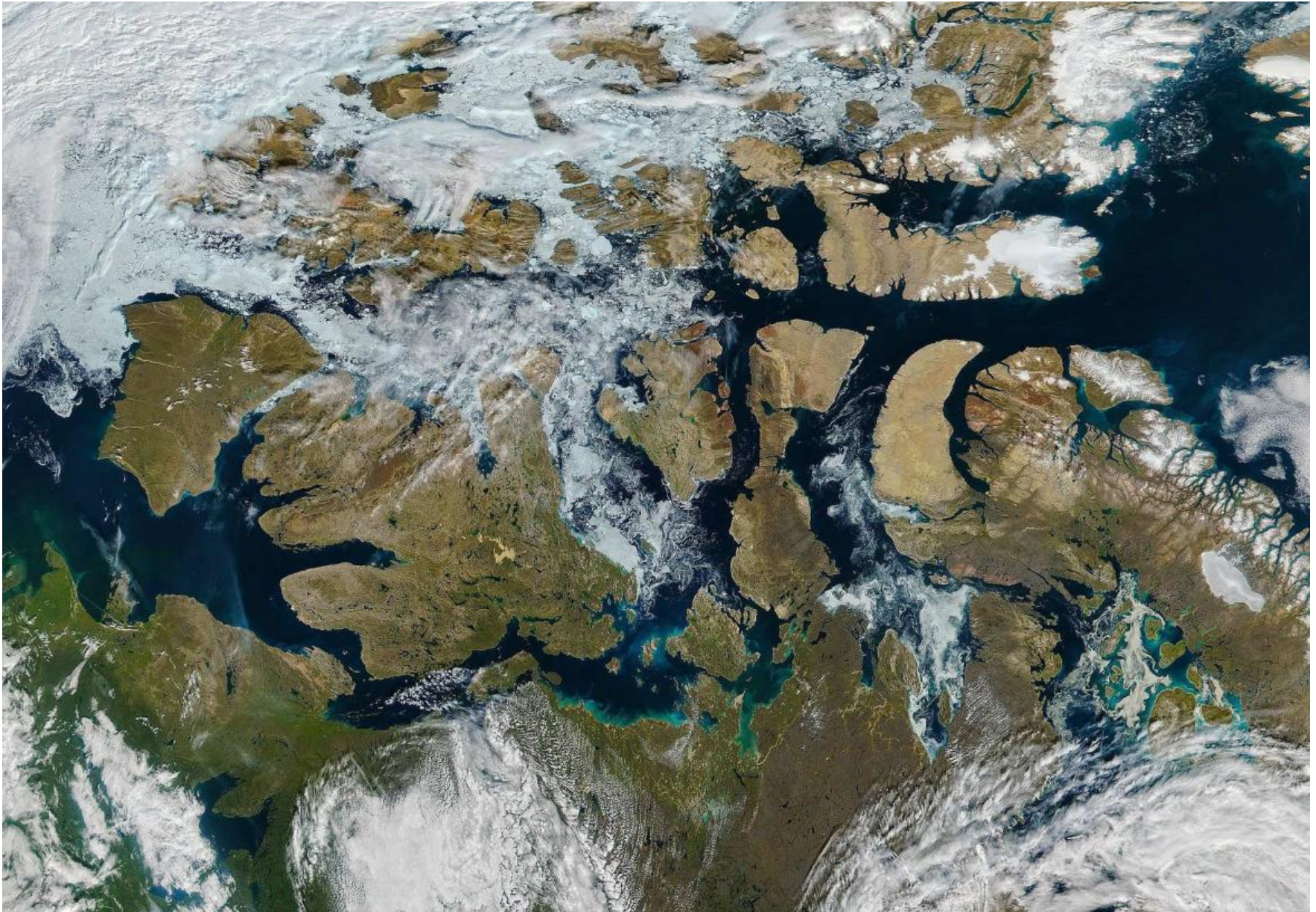


Northwest Passage Routes



This image shows a view of the Arctic on September 10, 2016 when sea ice extent was at 4.14 million square kilometers (1.60 million square miles). The orange line shows the 1981 to 2010 average extent for that day. The black cross indicates the geographic North Pole.
Credit: NSIDC/NASA Earth Observatory





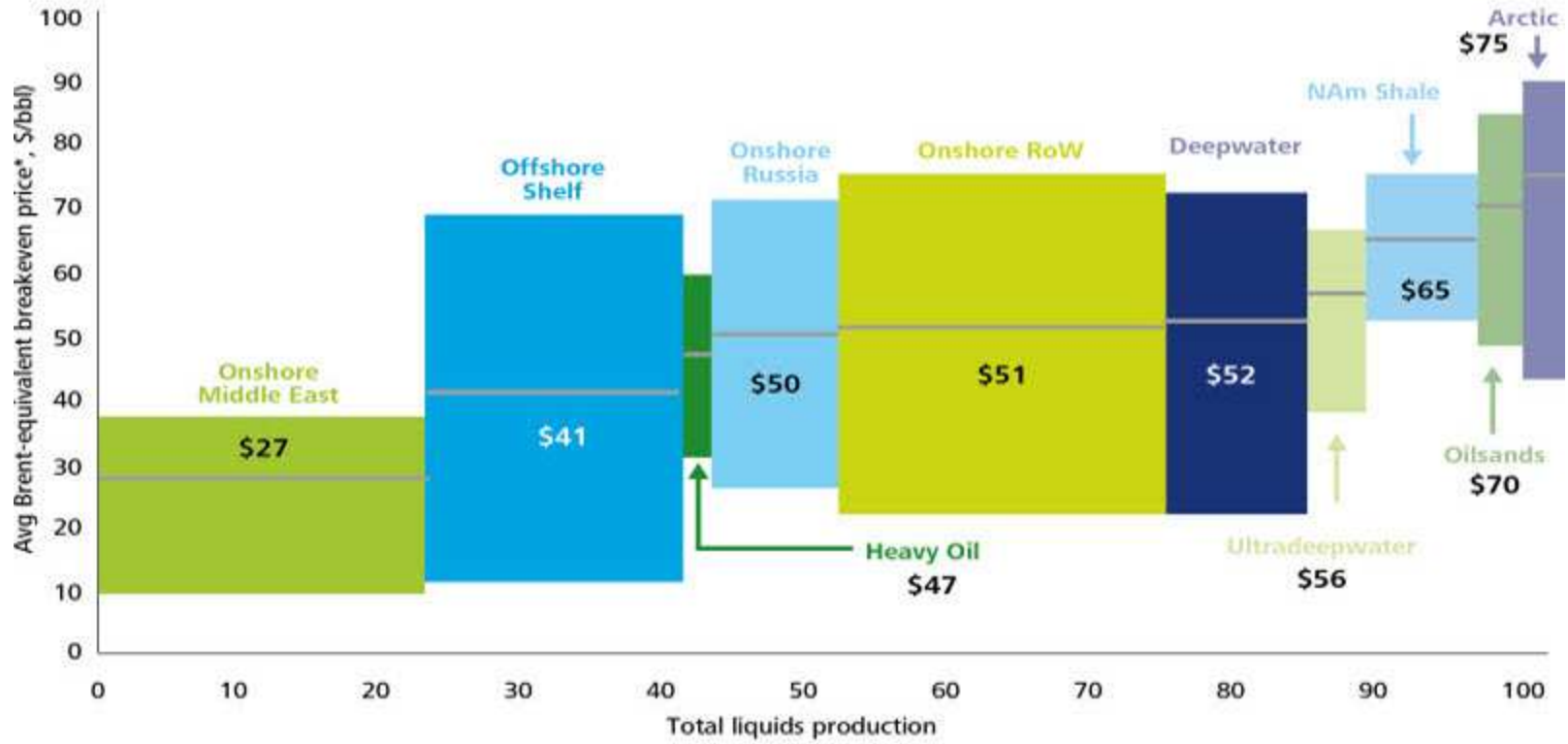
09 August 2016

Why the Arctic is not going to be useful for significant levels of trade:

- **Economies of scale**
- **Variability of weather – lack of predictable and stable schedules**
- **Network economics**

In other words, Its too expensive

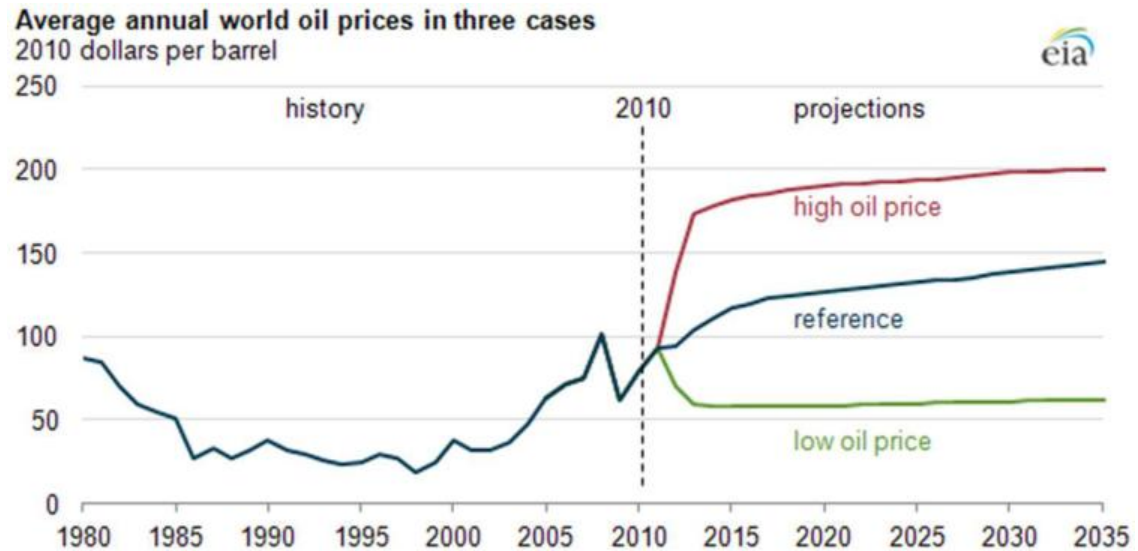
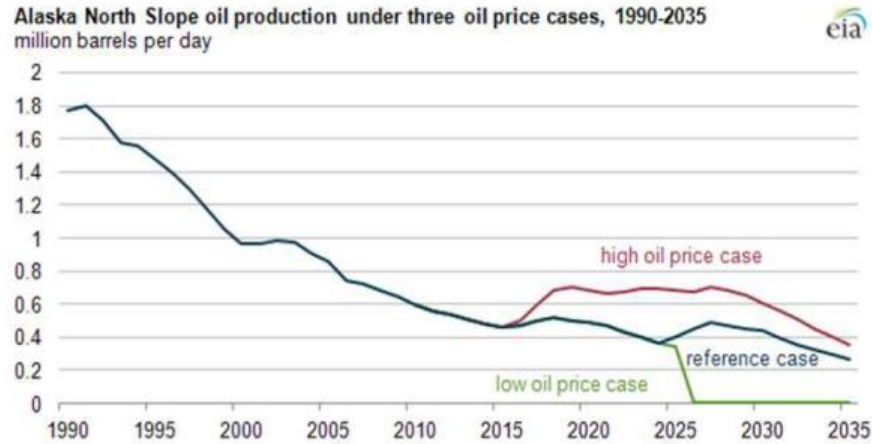
Figure 3. Average cost of crude oil production



Source: Rystad Energy, Morgan Stanley Commodity Research estimates

<http://www2.deloitte.com/uk/en/pages/energy-and-resources/articles/crude-awakening.html>

Projected Alaska North Slope oil production at risk beyond 2025 if oil prices drop sharply



Source: U.S. Energy Information Administration, [Annual Energy Outlook 2012](#)

A common assumption when thinking about the Arctic:

'Ceteris Paribus'

Definition: This commonly-used phrase stands for 'all other things being unchanged or constant'. It is used in economics to rule out the possibility of 'other' factors changing, i.e. the specific causal relation between two variables is focused.

What it really means:

The Problem is too complex to understand and provide an intelligent sounding analysis (or prediction) so we'll assume away the complex parts. A publishable article is easier that way.

What else might change?

The screenshot shows a news article on the RT website. The headline is "China biggest threat to global economic stability - former IMF chief economist". The article is dated 26 Sep, 2018. The main image shows a construction site with a large red sign that reads "质第一 顾客至" (Quality first, customer至上) and "以人为本 团结进取" (People-oriented, united and forward-looking). The article text mentions that soaring debt and stagnant growth in China are a major threat to the global economy, according to Harvard professor and former IMF chief economist Kenneth Rogoff.

The structure of the global economy undergoes fundamental change?

The infographic features a red dragon graphic and a portrait of George Soros. It includes a line chart showing China's GDP growth from 2009 to 2018.

What's up?
China's super-cities are borrowing like mad to build highways, airports to record-breaking skyscrapers

Its shadow banking system, in which banks and finance companies extend loans at high interest rates outside regulation is a big cause of worry

While its central bank is looking to curb debt binge, the govt is forcing easing of credit to keep GDP growing north of 7%

China's GDP growth
YoY, in %

2009	10.7
2010	11.9
2011	7.4
2012	7.8

Source: Bloomberg
Dec '09

The magnitude
17.9 trillion yuan, or \$2.96 trillion – Borrowings by provinces, counties and townships has reached

63% growth of local debt since 2010, much faster than 40% growth of the economy

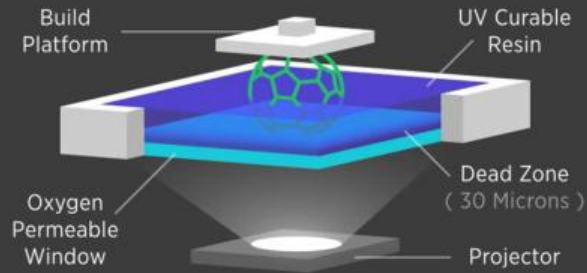
69% share of shadow banking of China's 2012 GDP, estimated by JPMorgan

57% of local government debt comes from bank loans, rest from bonds and shadow banking network

China debt crash may be the next global crisis

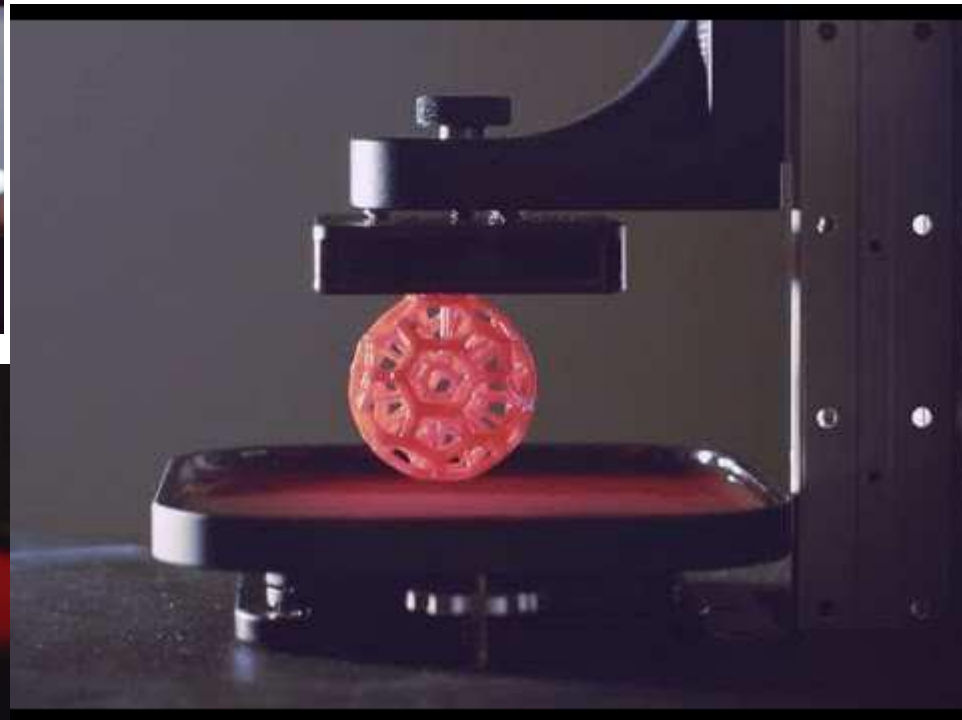
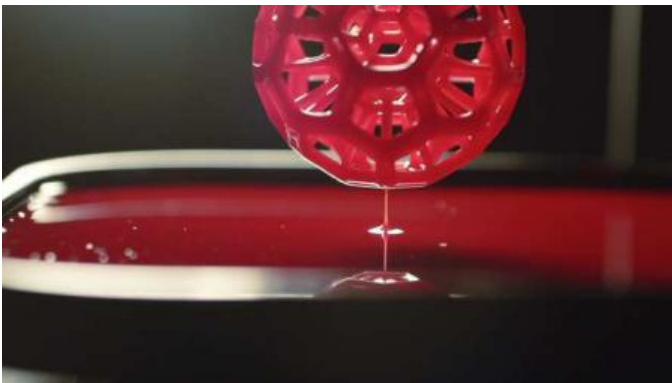
For legendary investor George Soros, the main risk facing the world isn't the euro, or a Japanese asset bubble, but a Chinese debt disaster that's unfolding in plain sight

Continuous Liquid Interface Production



A fundamental shift in methods of production?

Imagine if "trade" no longer happened by moving stuff across the surface of the ocean





Thank You!!