

SHALE NEW WORLD



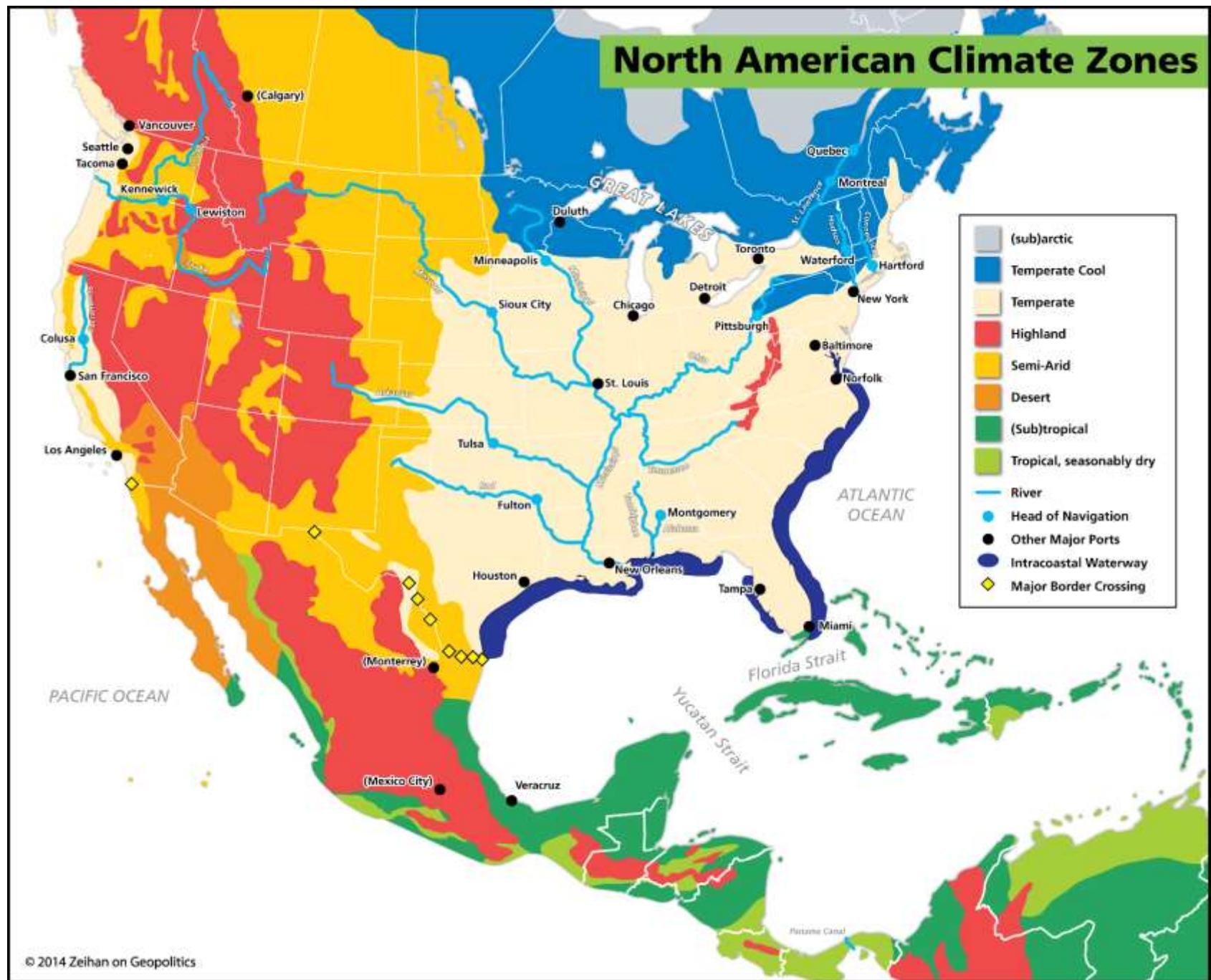
PETER ZEIHAN

Approaching the American Age

- The End of the (Old) World
- Shale New World

Peter Zeihan
CEE
December 9, 2015

Understanding American Success: The American Geography



The End of the (Old) World



The End of the (Old) World

1944: Bretton Woods

- Empires abolished
- Free trade established
- U.S. market access granted
- All shipping protected
- Security guaranteed

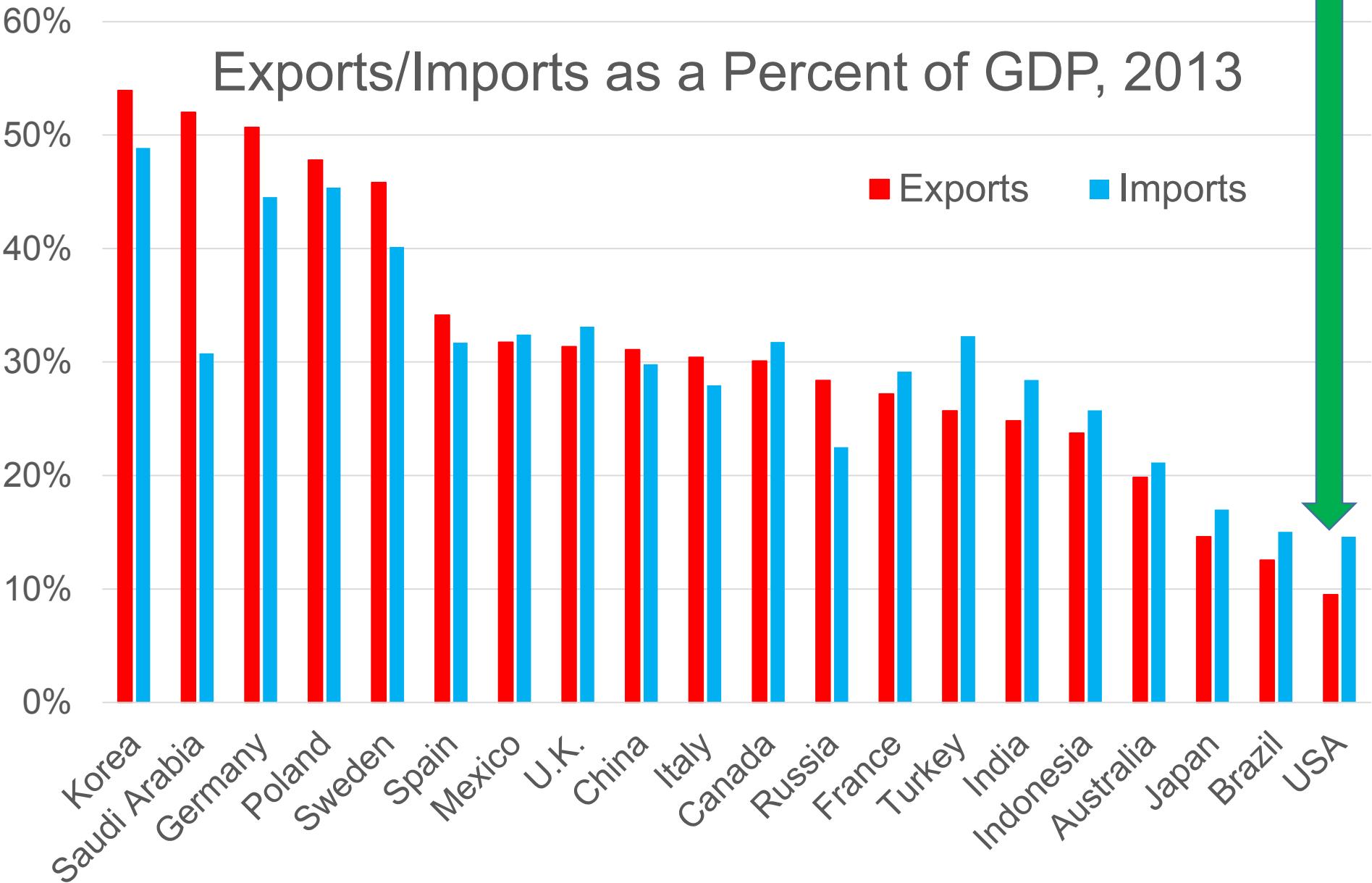
⇒ Global peace and prosperity



The End of the (Old) World

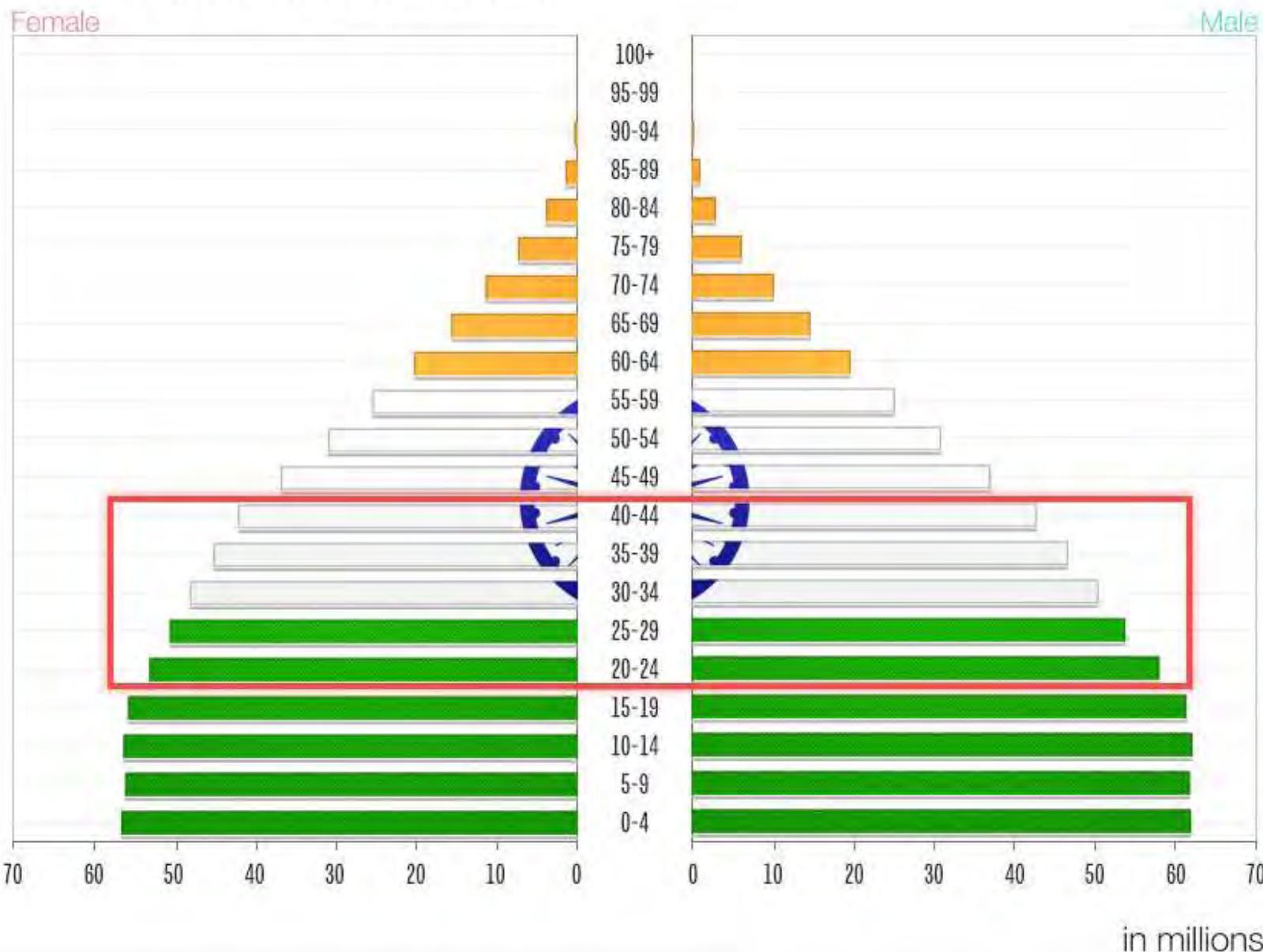


The End of the (Old) World: Trade? What Trade?



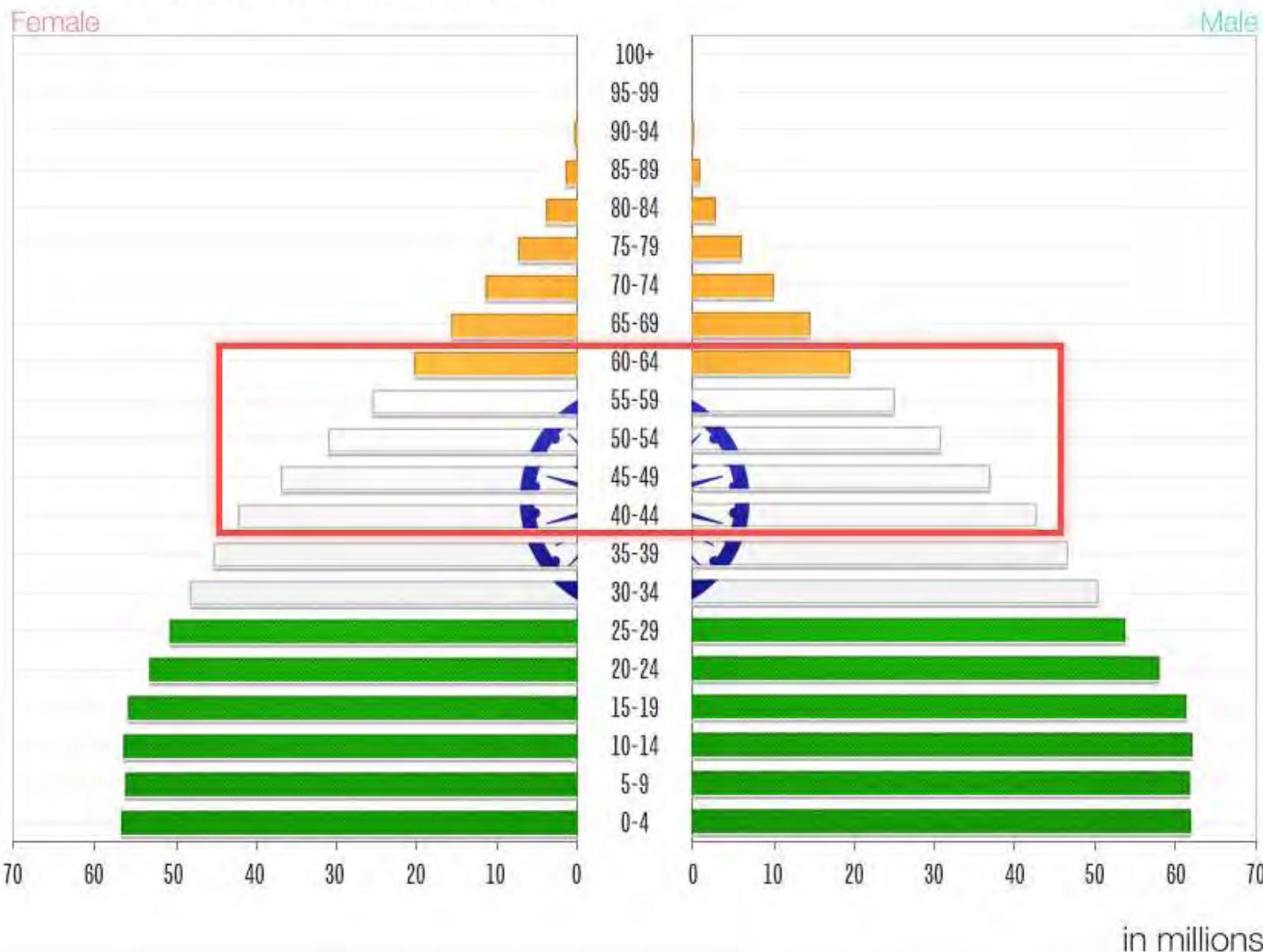
Shifting Demographies

INDIA DEMOGRAPHY: 2015



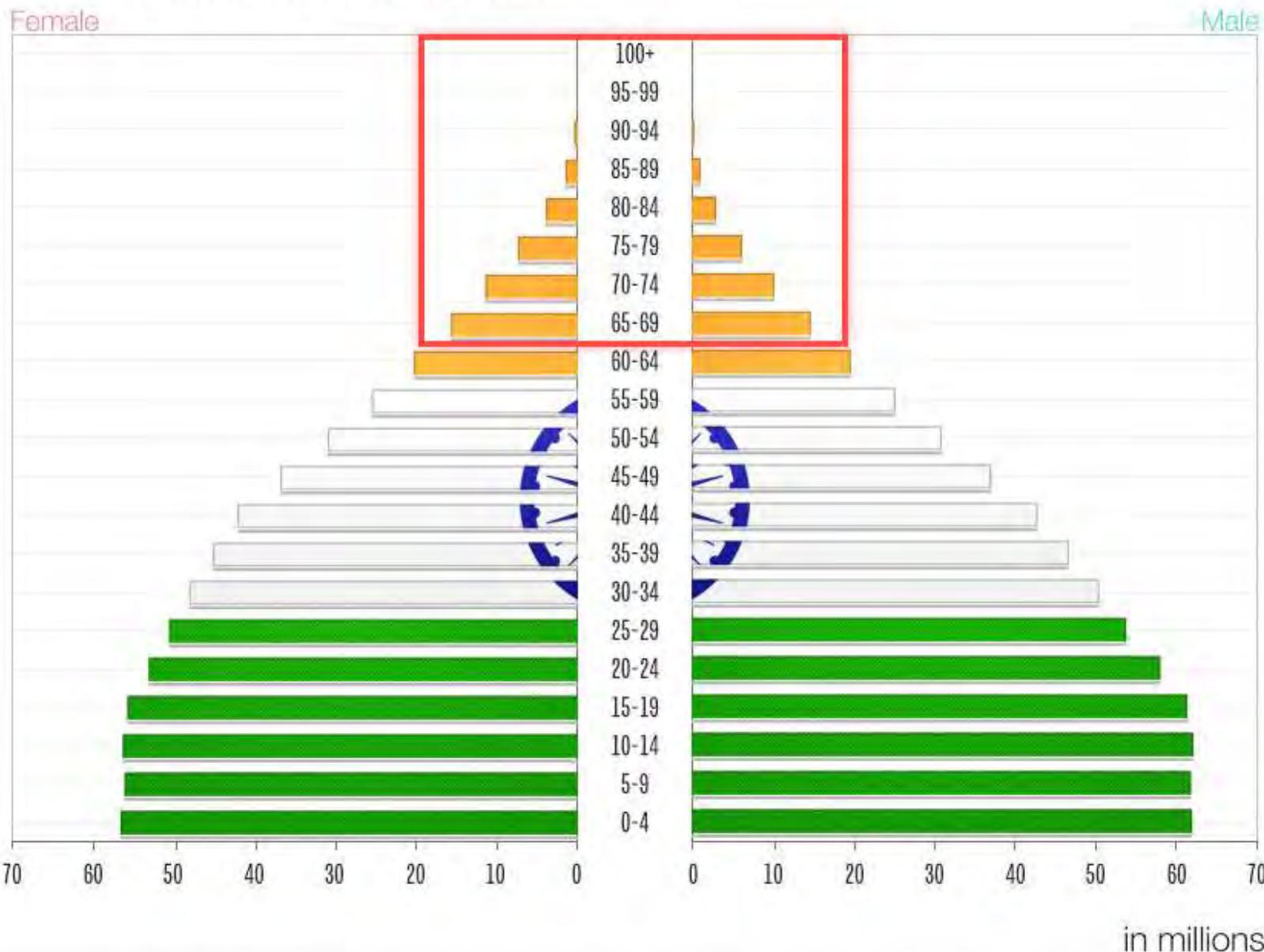
Shifting Demographies

INDIA DEMOGRAPHY: 2015



Shifting Demographies

INDIA DEMOGRAPHY: 2015



Shifting Demographies

INDIA DEMOGRAPHY: 2015

Female

Male

B

X

Y

B

X

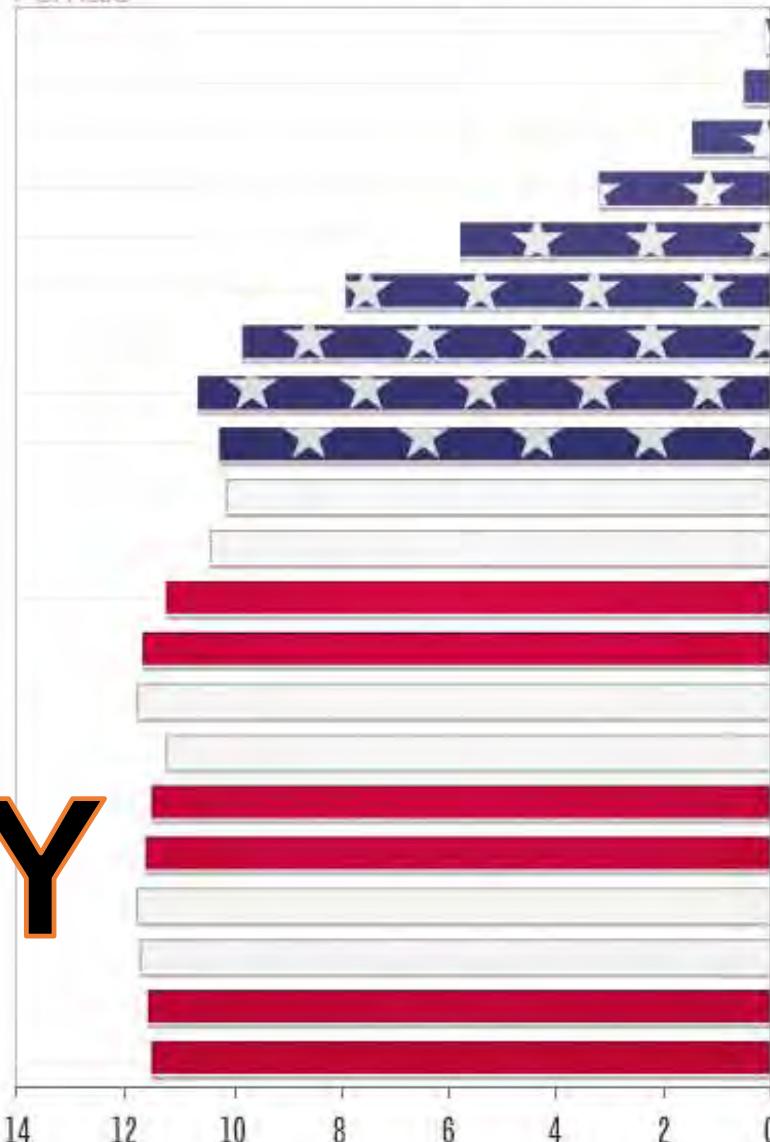
Y



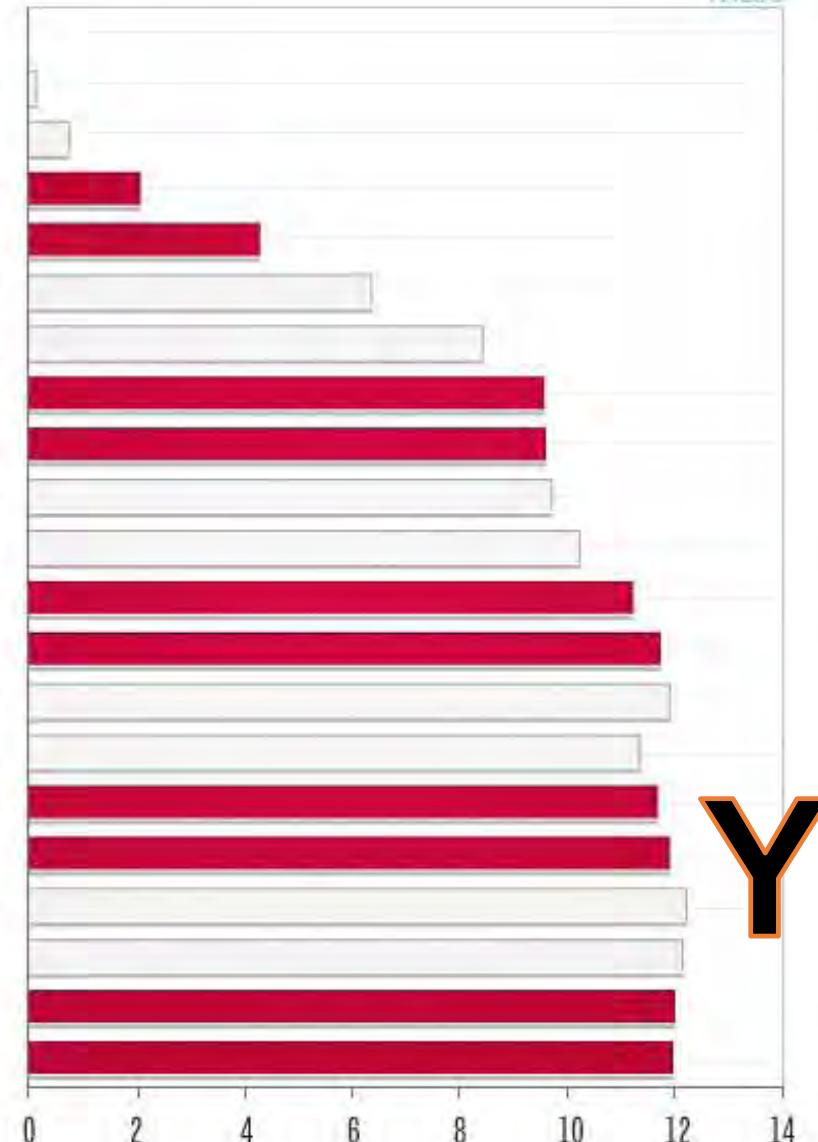
Shifting Demographies

UNITED STATES DEMOGRAPHY: 2030

Female



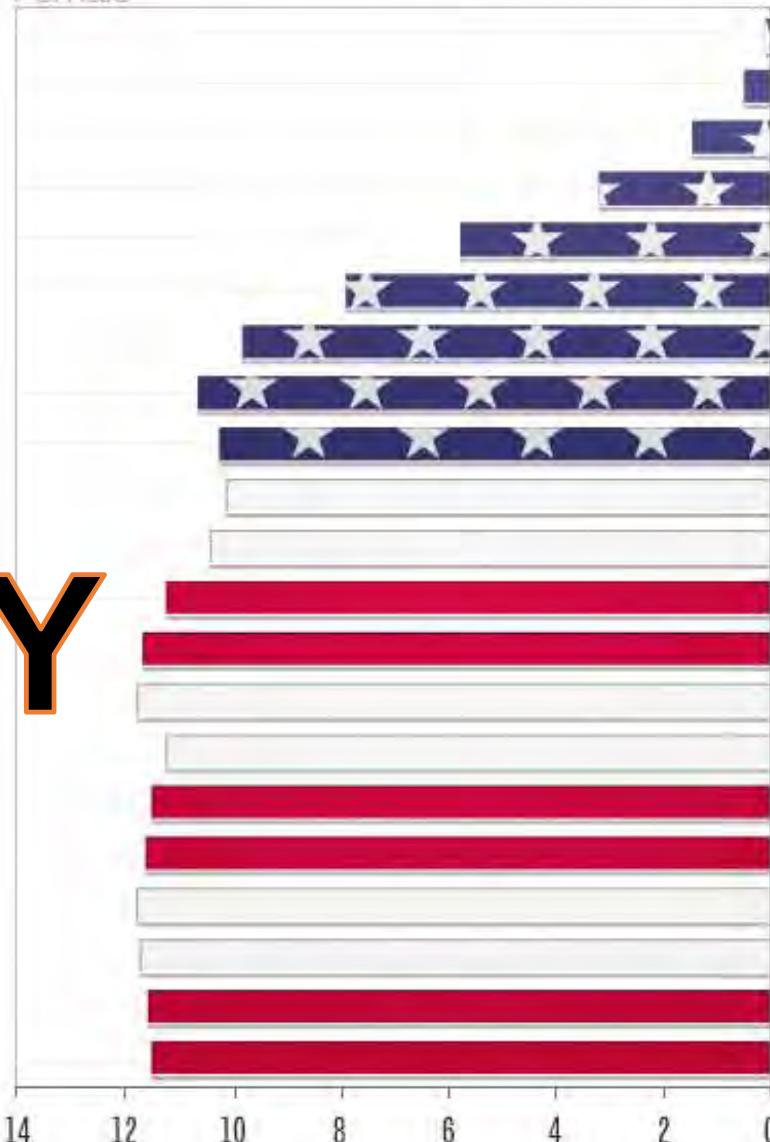
Male



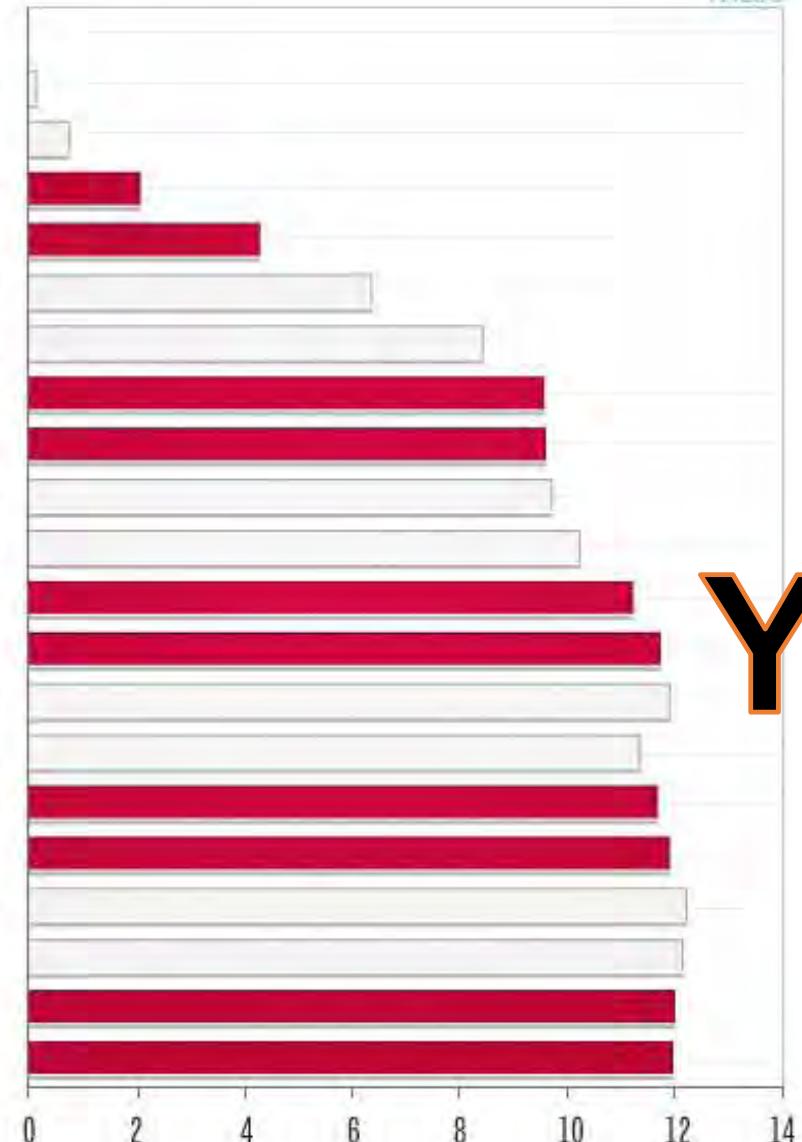
Shifting Demographies

UNITED STATES DEMOGRAPHY: 2030

Female

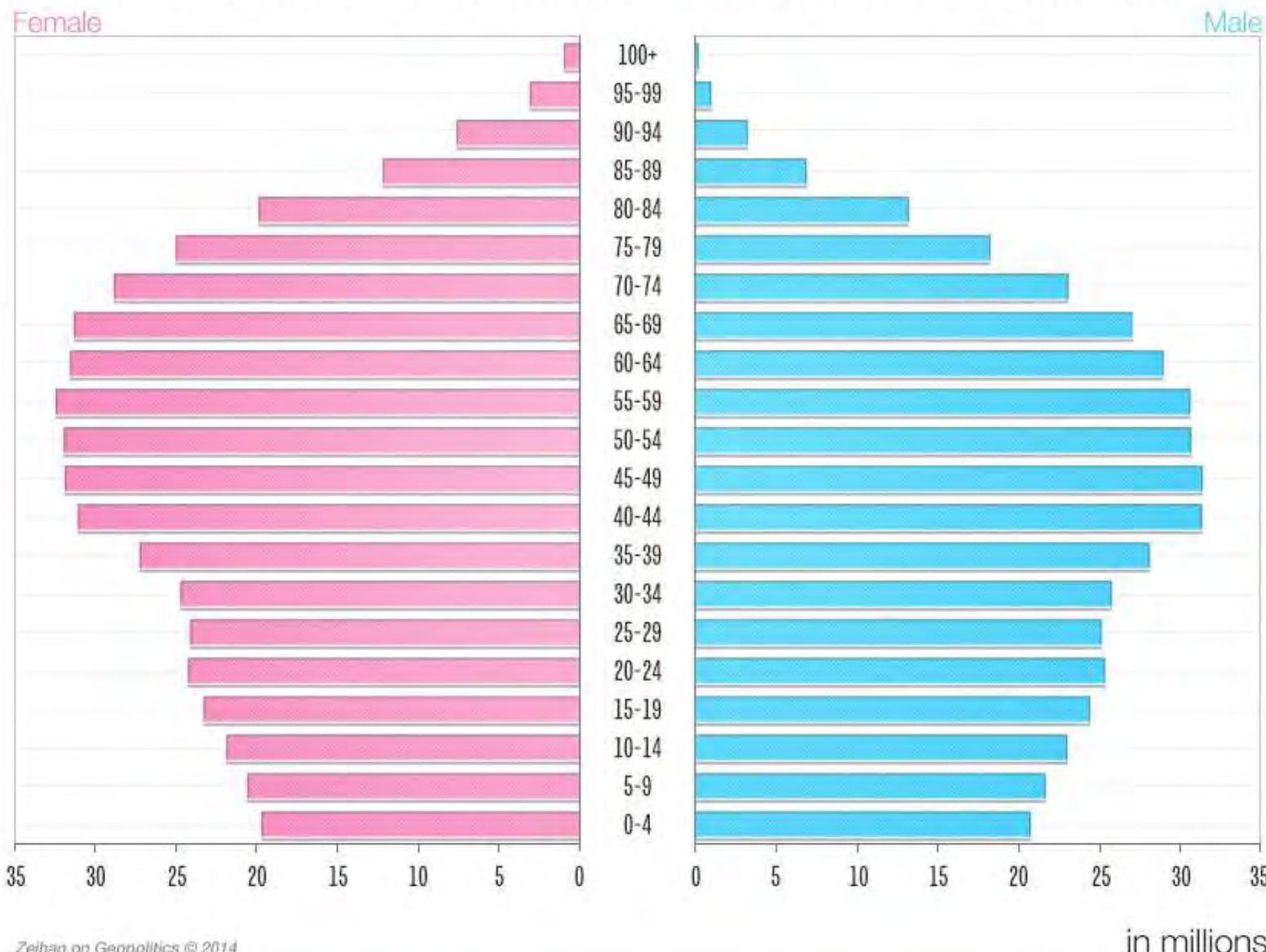


Male



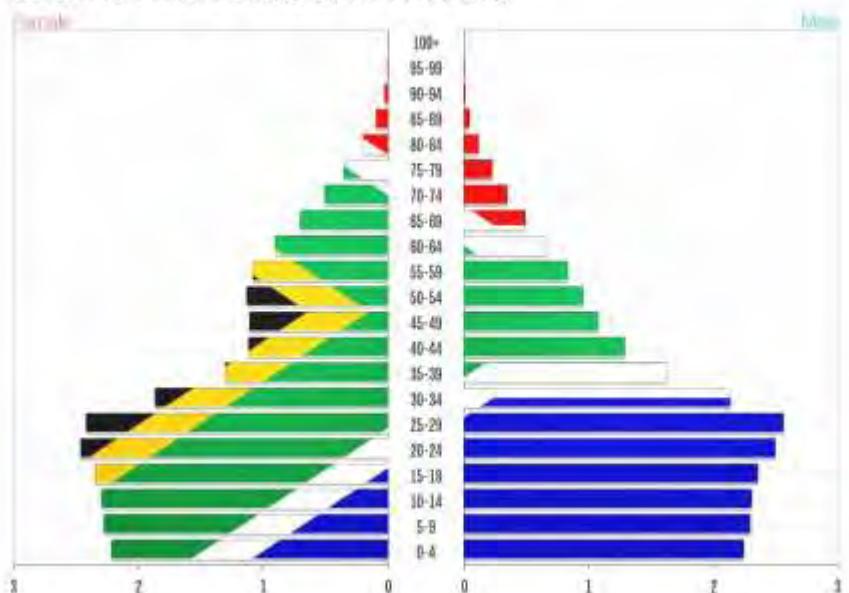
Shifting Demographies

DEVELOPED WORLD DEMOGRAPHY WITHOUT U.S.: 2030

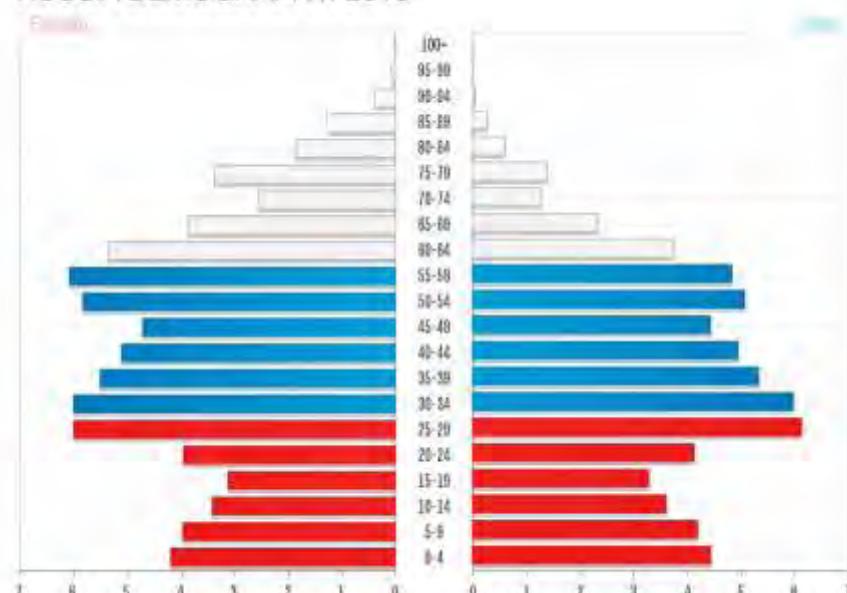


Shifting Demographies

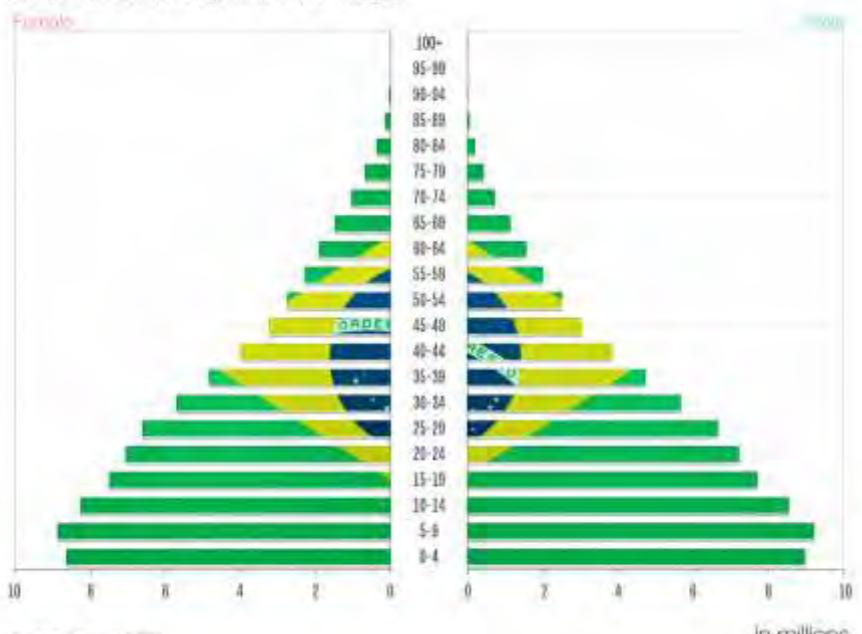
SOUTH AFRICA DEMOGRAPHY: 2015



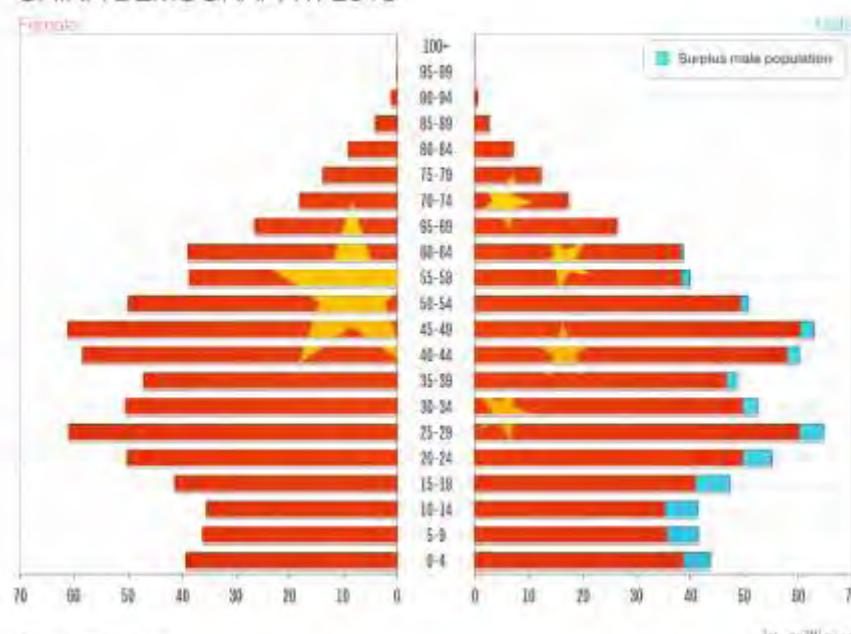
RUSSIA DEMOGRAPHY: 2015



BRAZIL DEMOGRAPHY: 1990

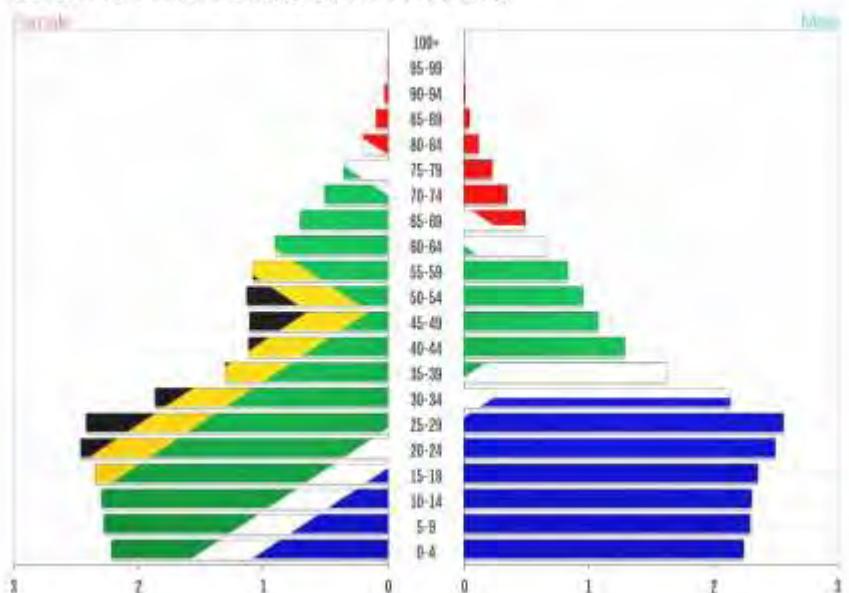


CHINA DEMOGRAPHY: 2015

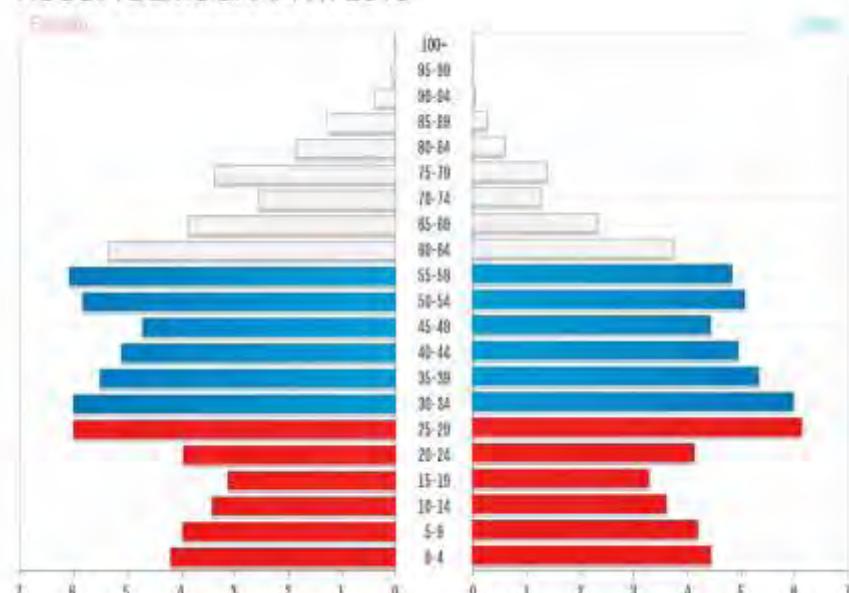


Shifting Demographies

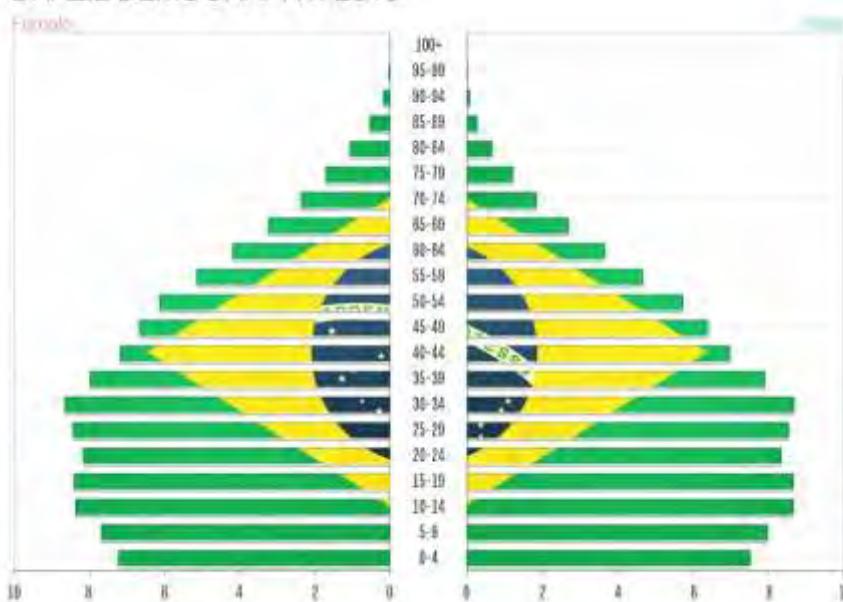
SOUTH AFRICA DEMOGRAPHY: 2015



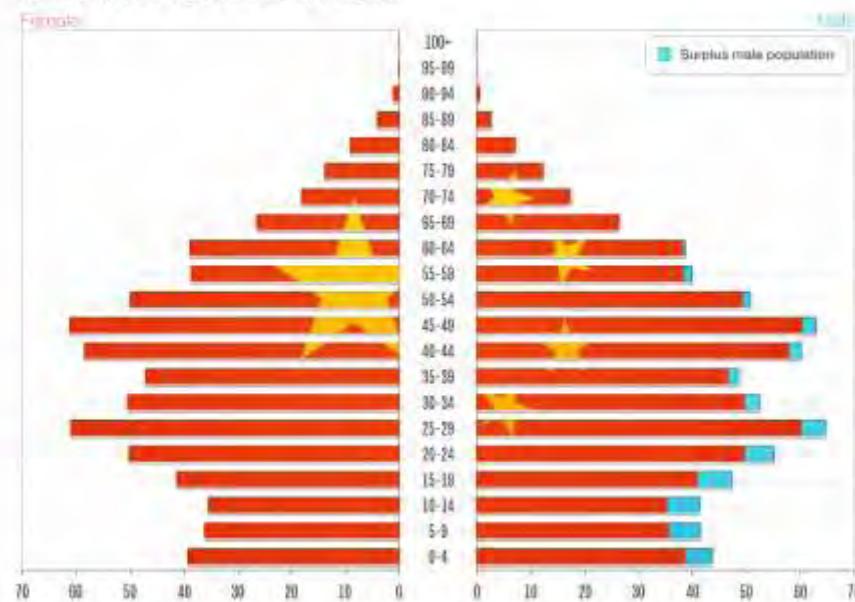
RUSSIA DEMOGRAPHY: 2015



BRAZIL DEMOGRAPHY: 2015



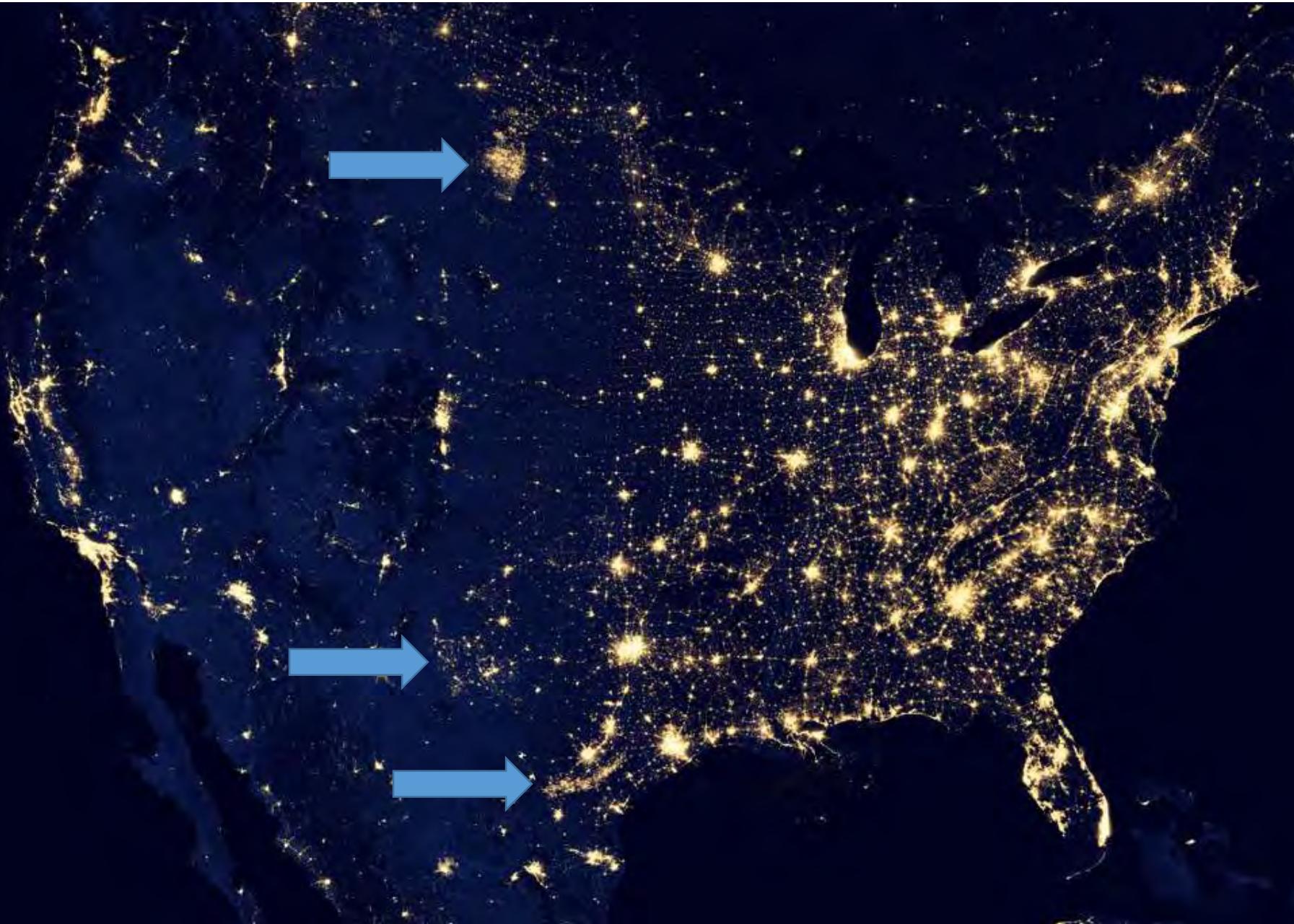
CHINA DEMOGRAPHY: 2015



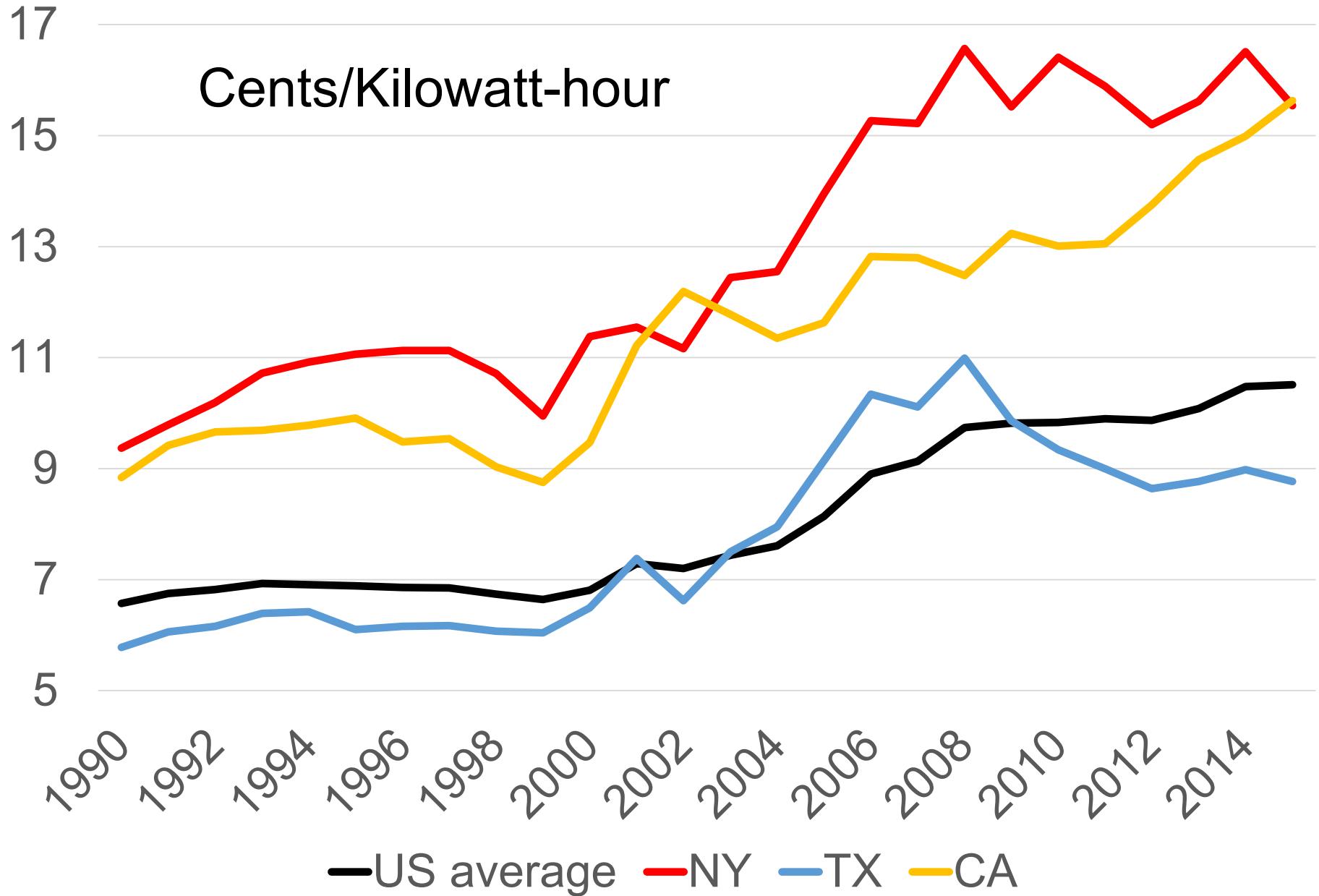
The Reality of Shale (Gas)



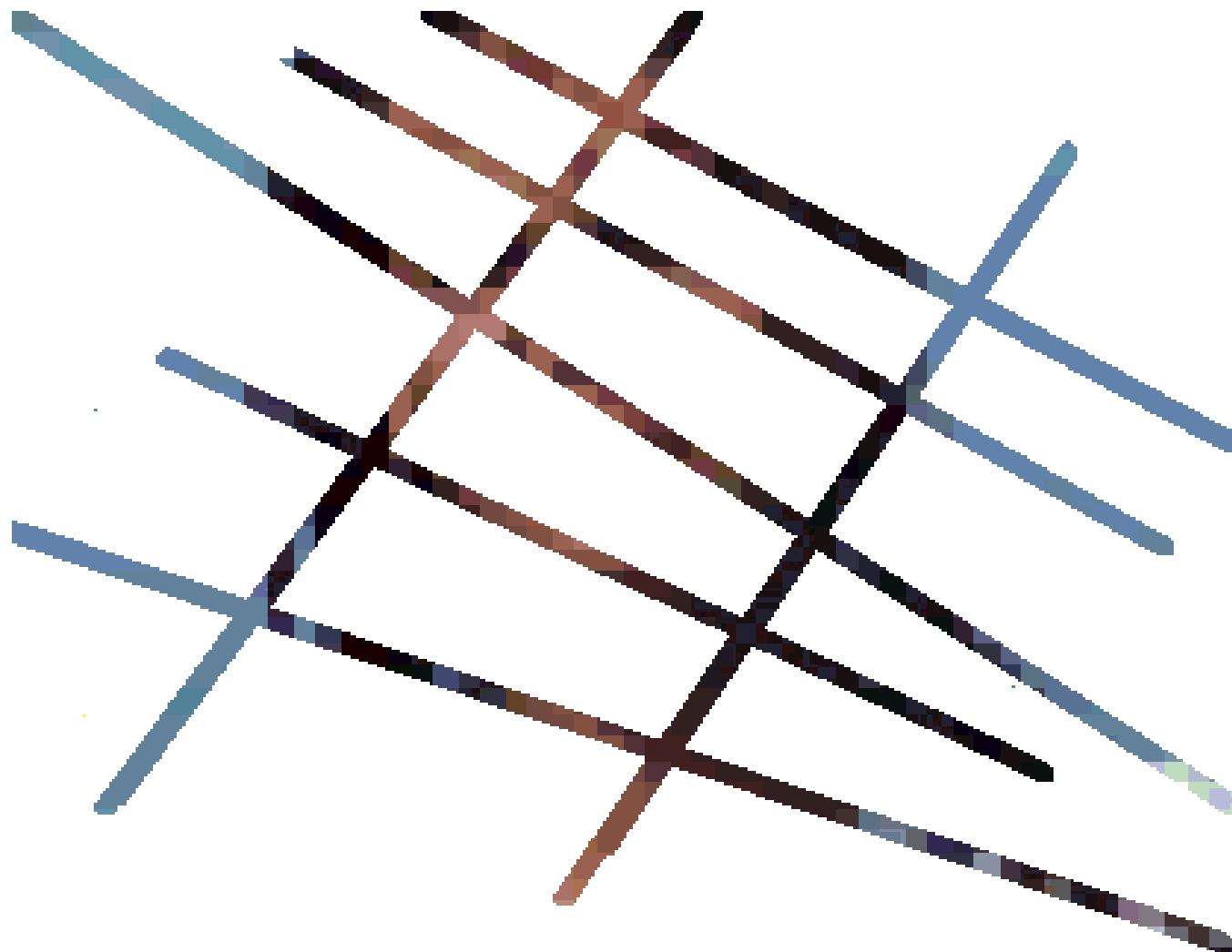
The Reality of Shale (Gas)



The New Face of Electricity



Shale's New Rules: 3D/4D Seismic

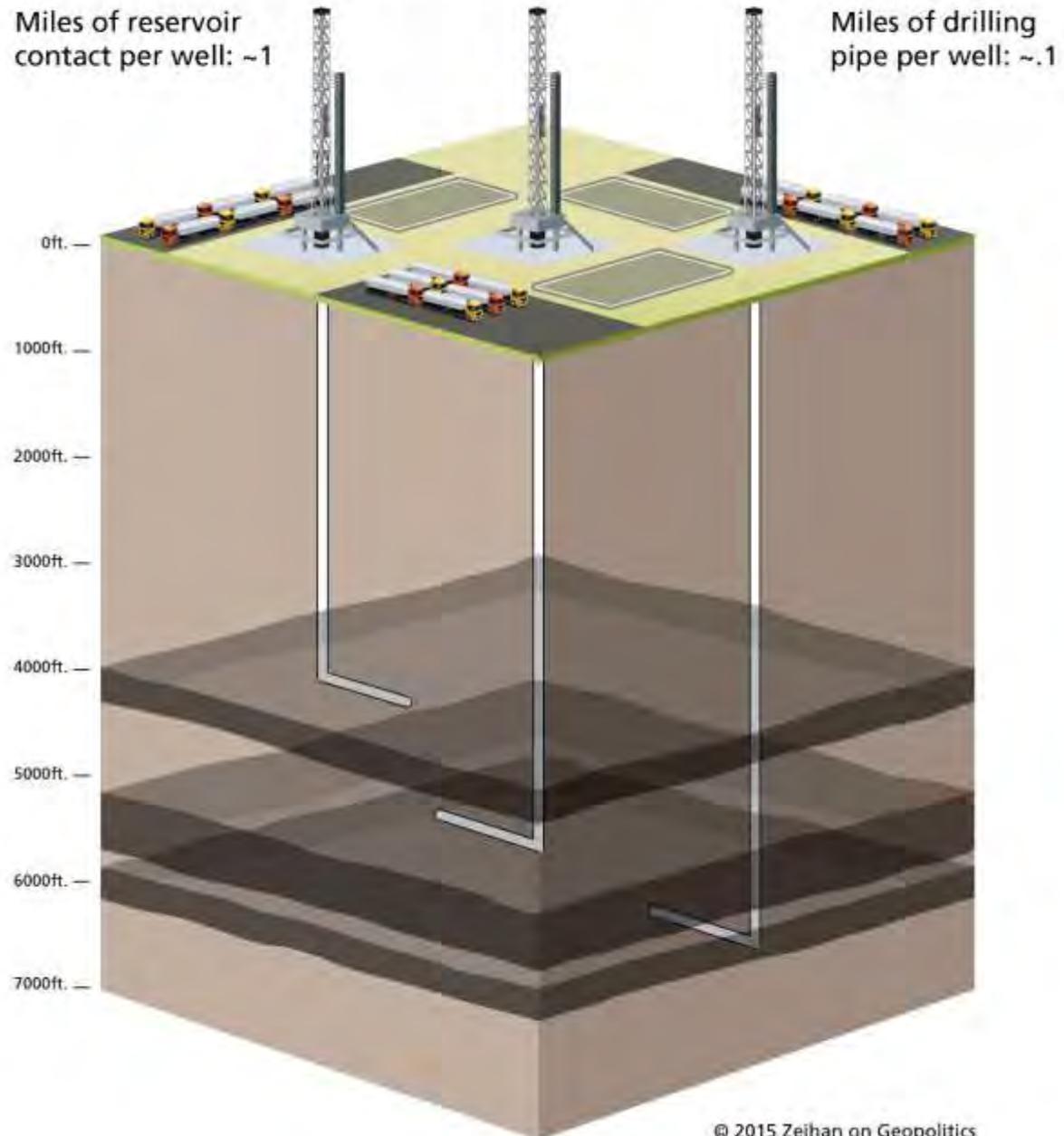


Shale's New Rules: 3D/4D Seismic



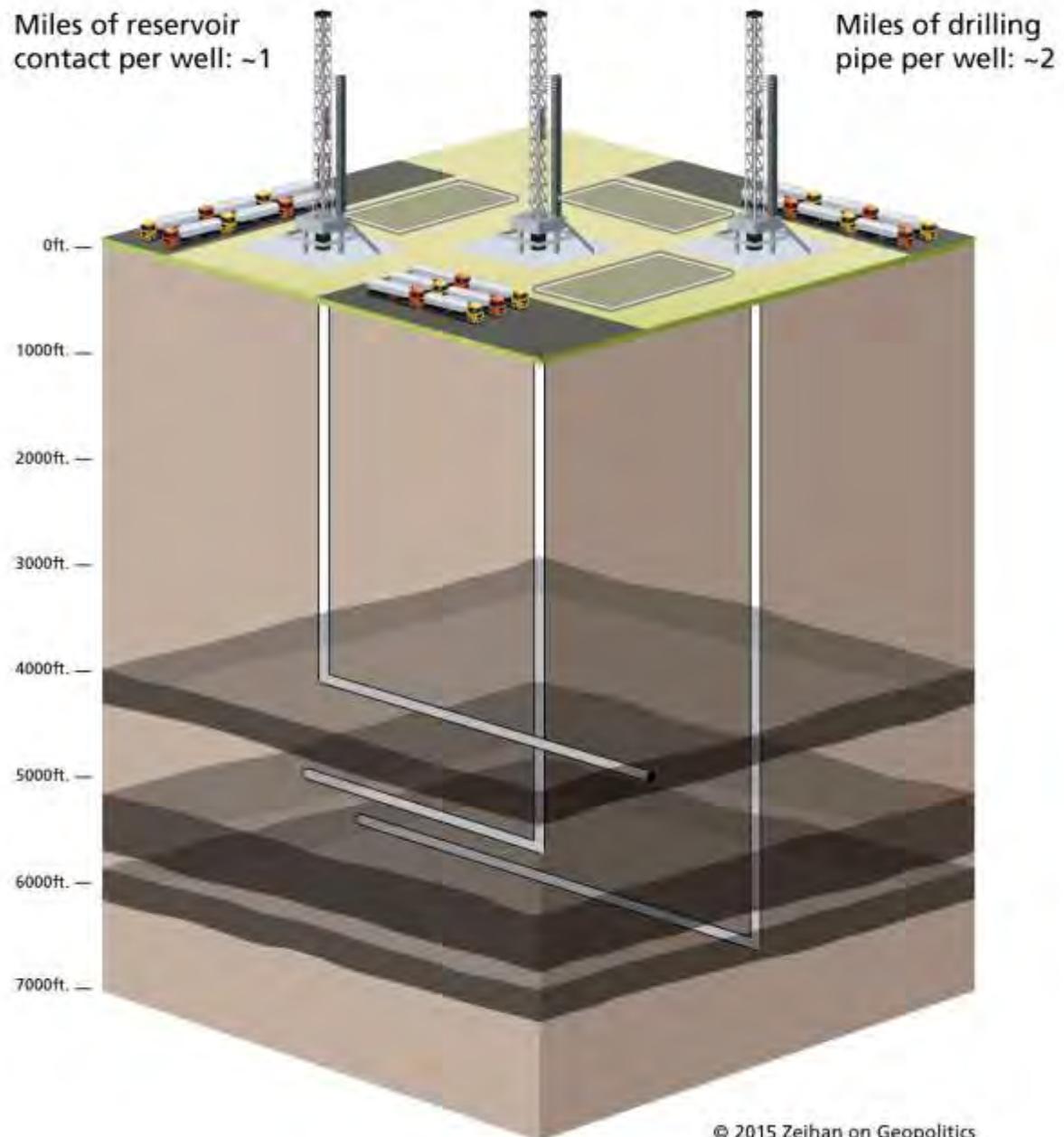
Basic Horizontal Drilling: 2010

Shale's New Rules: Evolution of a Pad



Advanced Horizontal Drilling: 2012

Shale's New Rules: Evolution of a Pad

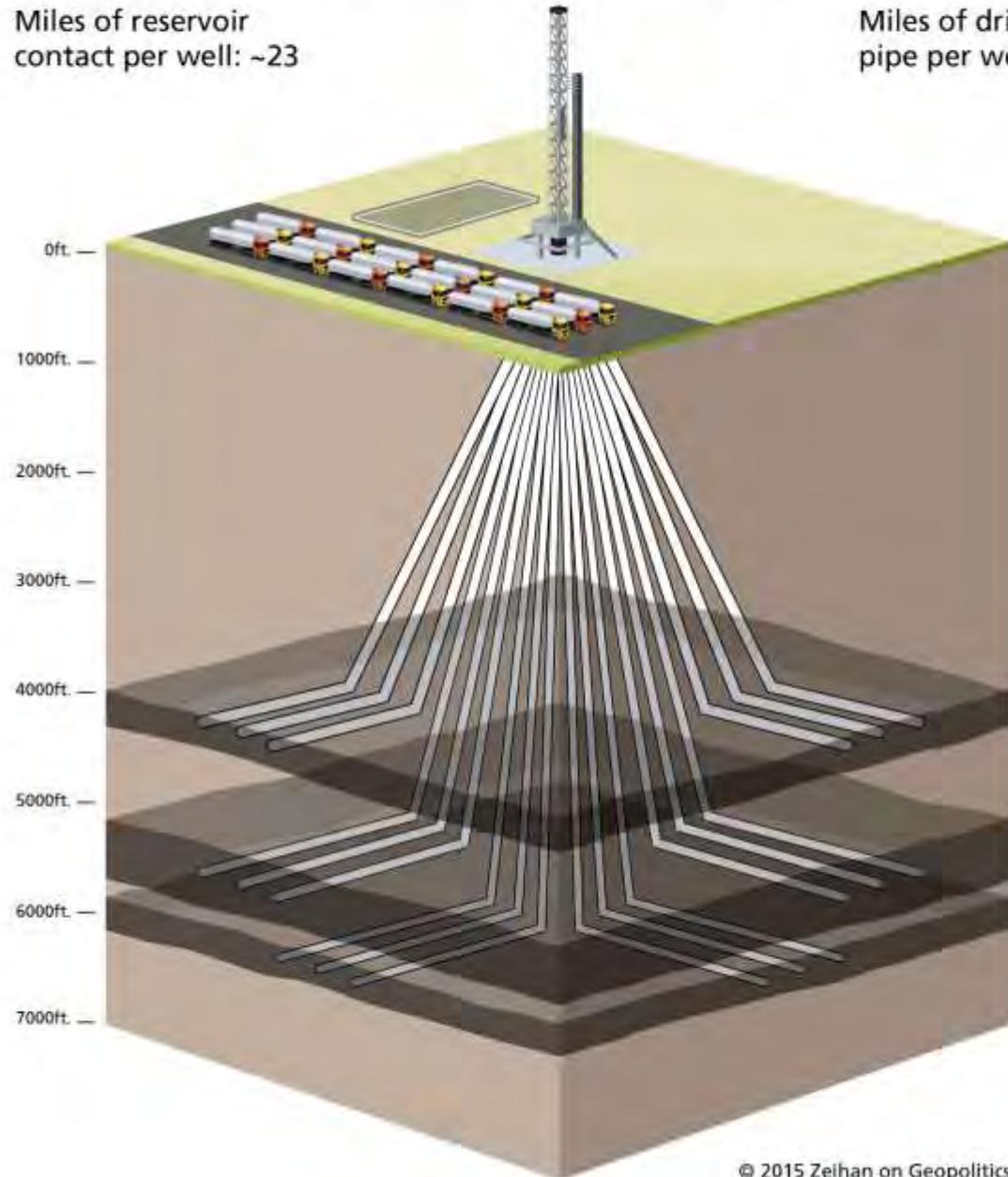


Pad Drilling: 2014

Shale's New Rules: Evolution of a Pad

Miles of reservoir contact per well: ~23

Miles of drilling pipe per well: ~43

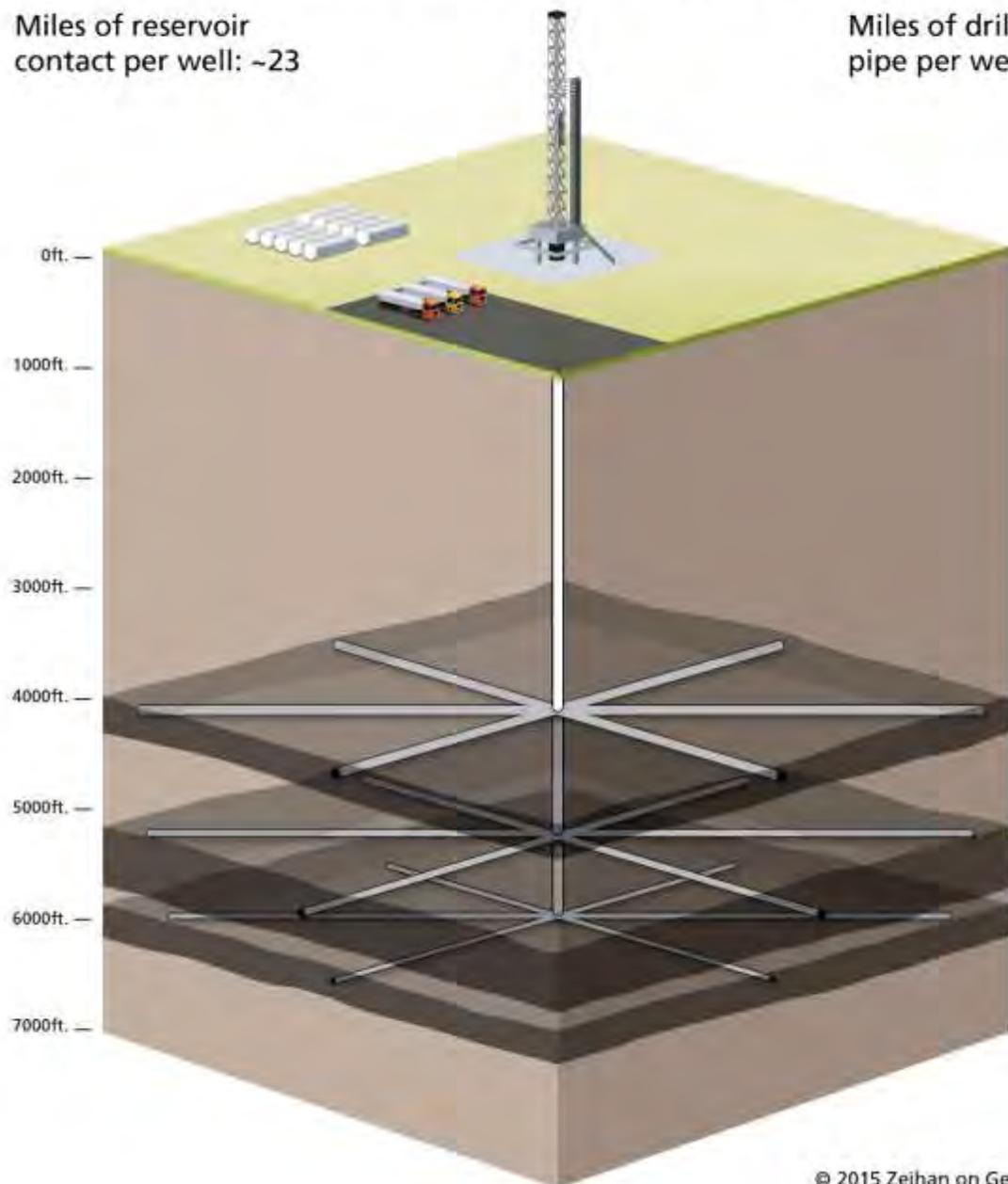


Multilateral Drilling: Mid-2015

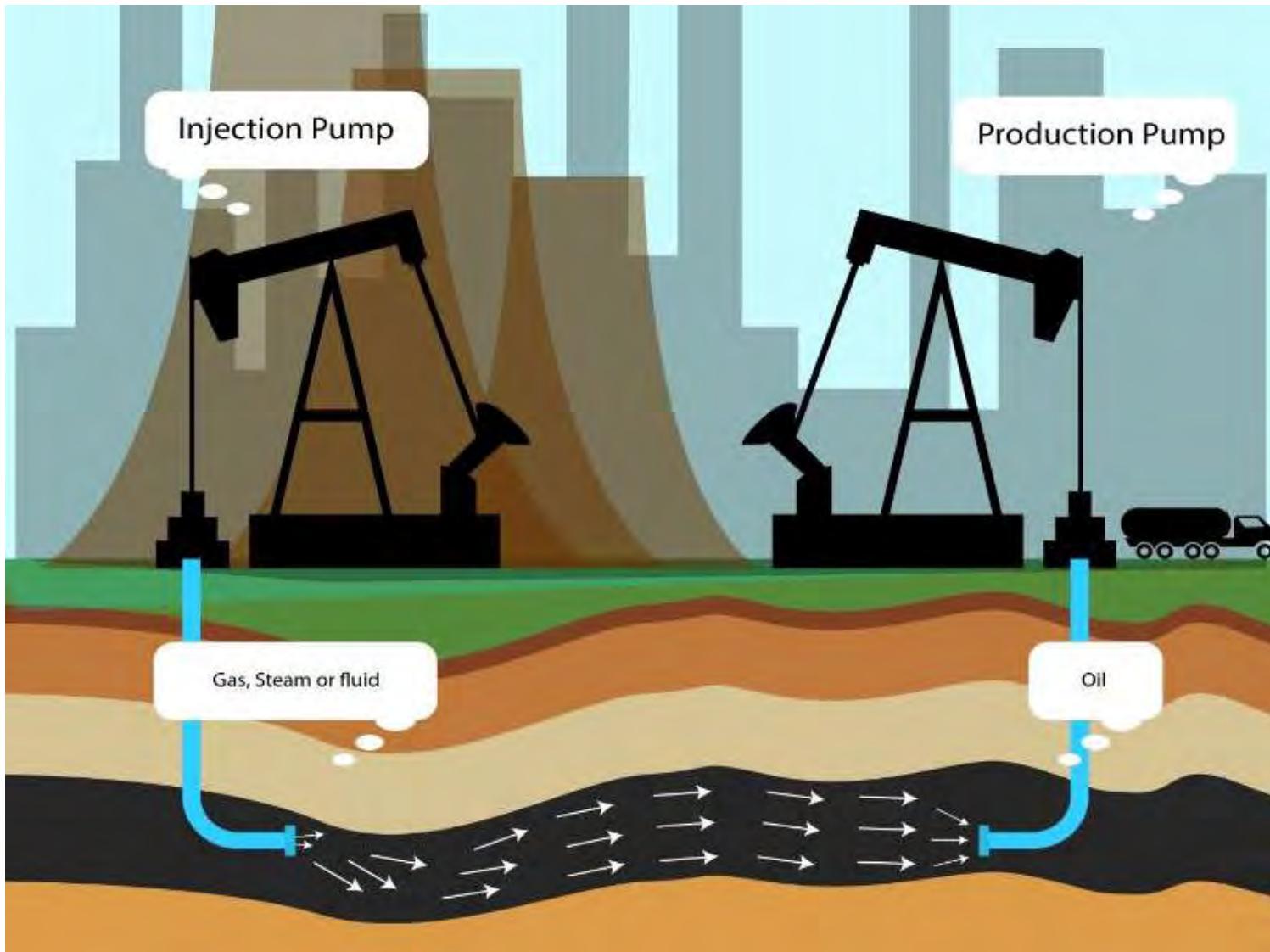
Shale's New Rules: Evolution of a Pad

Miles of reservoir contact per well: ~23

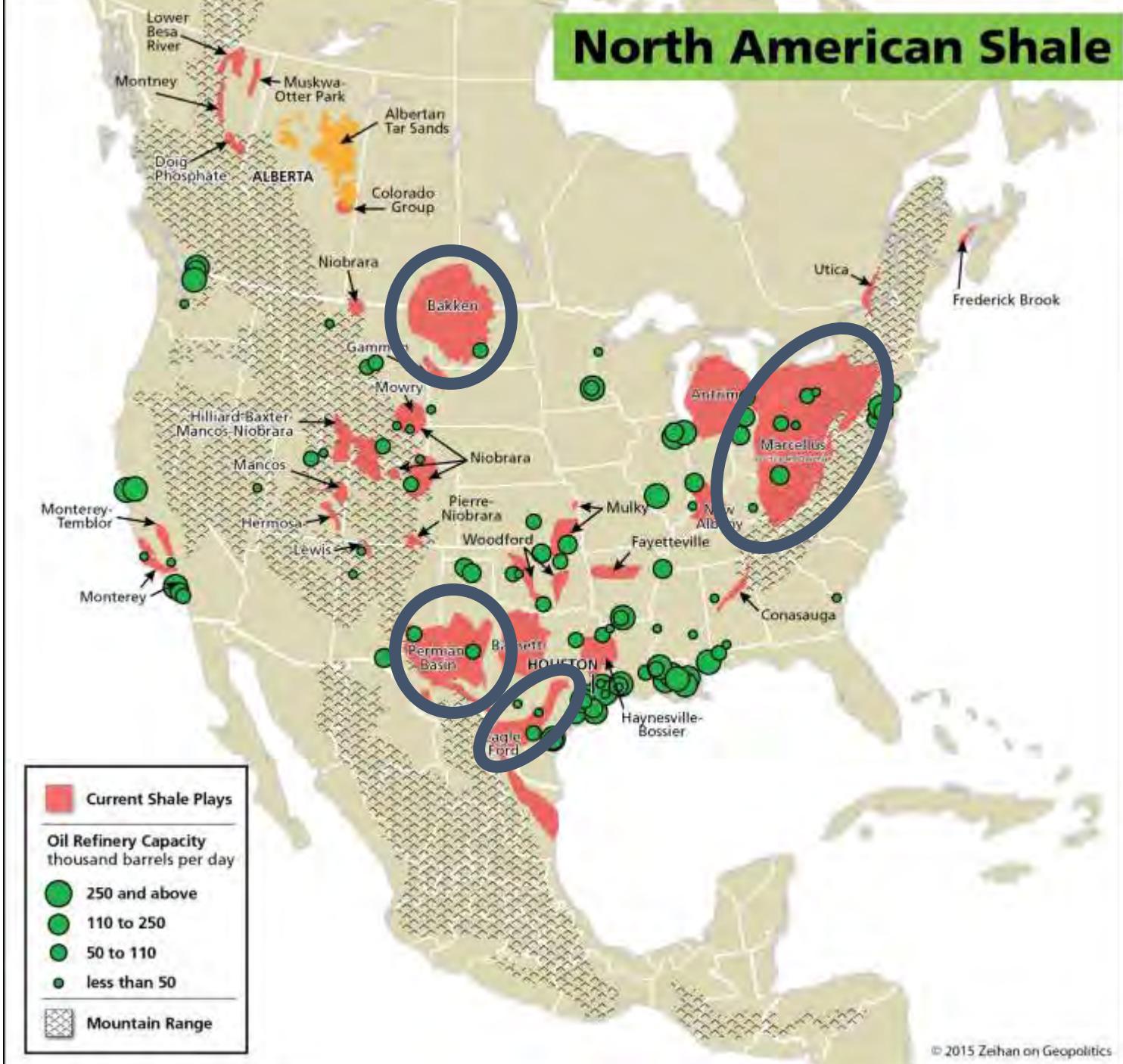
Miles of drilling pipe per well: ~24



Shale's New Rules: Secondary Stimulation



Shale's New Rules: Tech Concentration



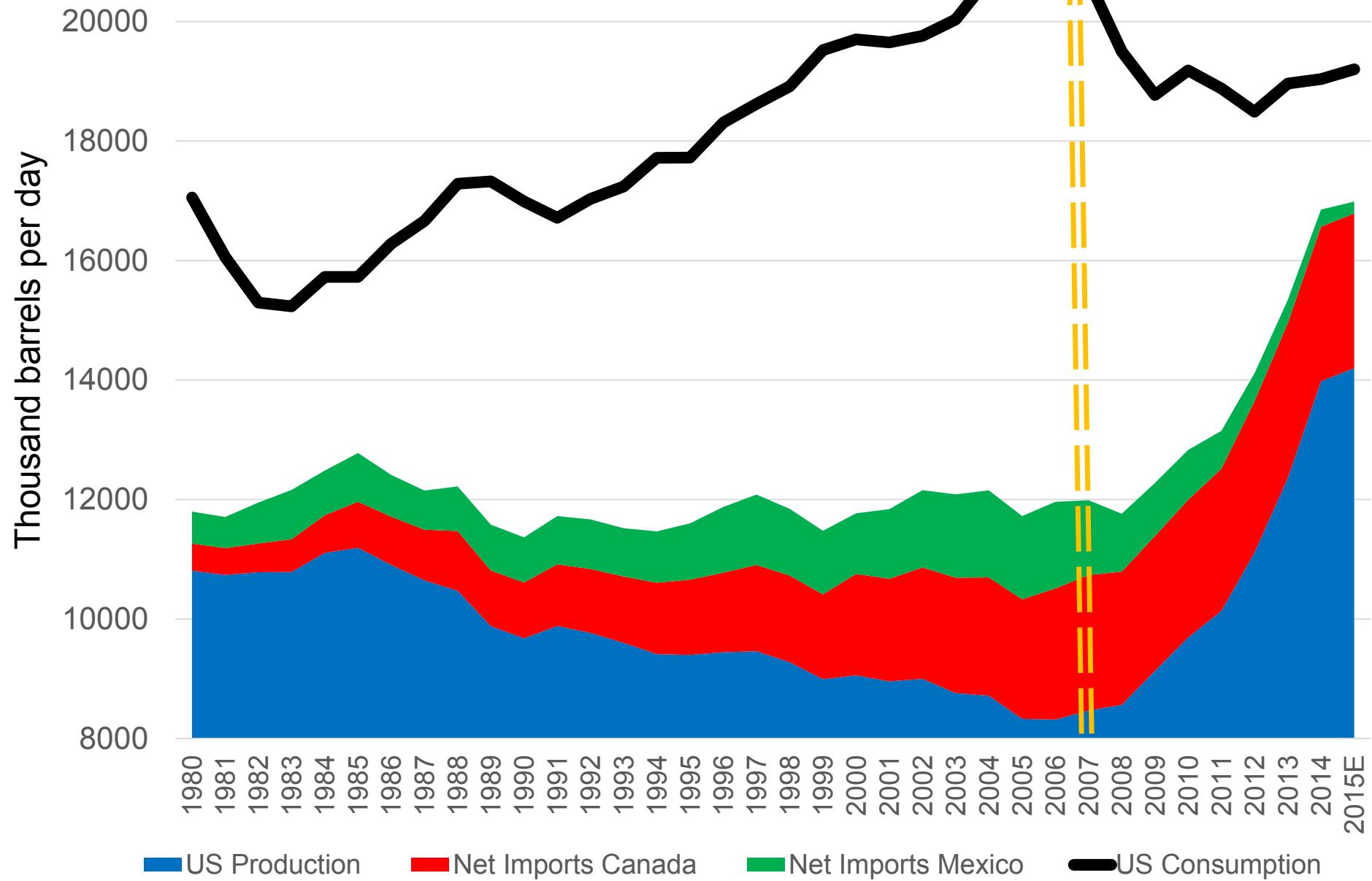
Shale's New Rules: Gathering

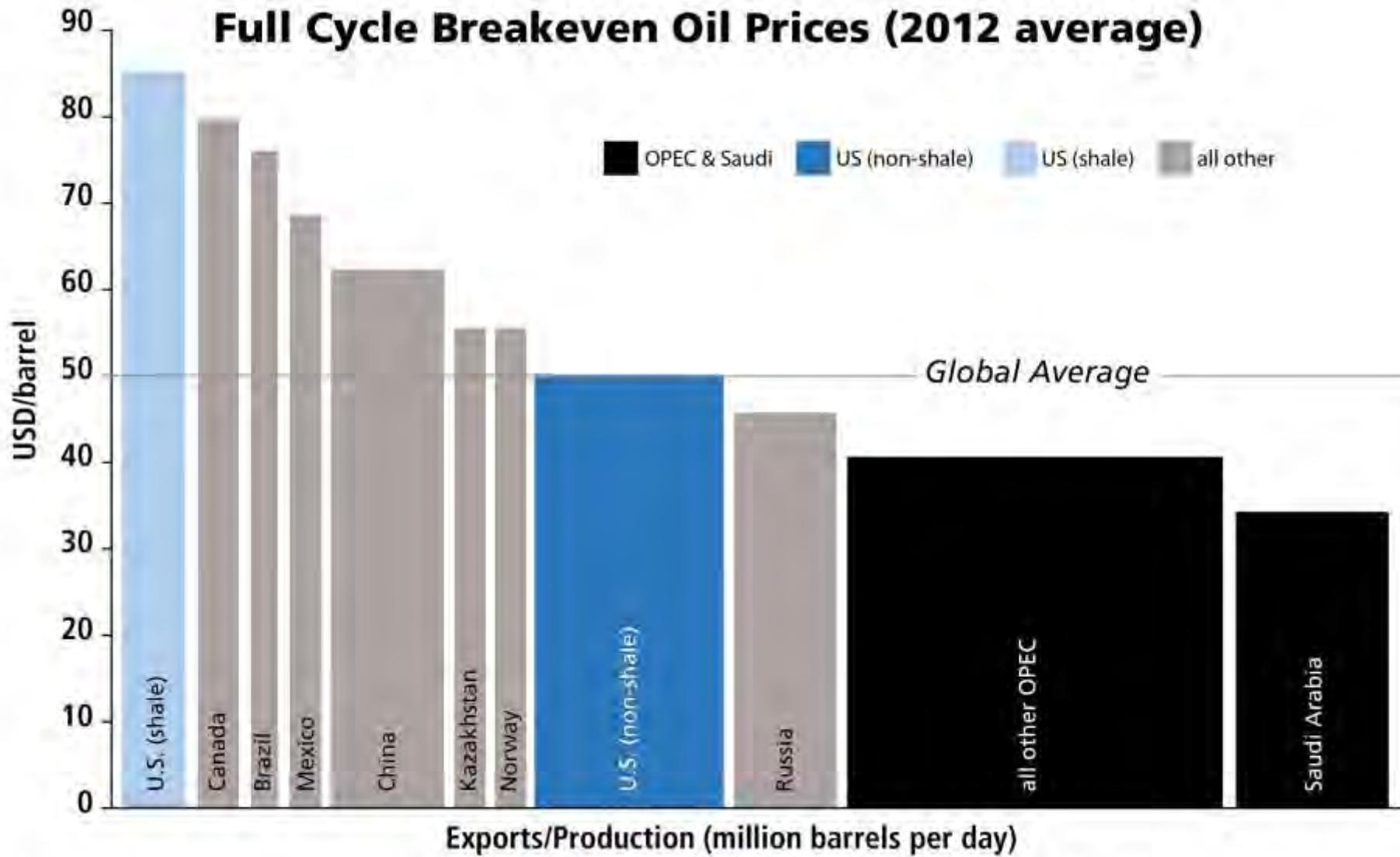


Shale's New Rules: Gathering

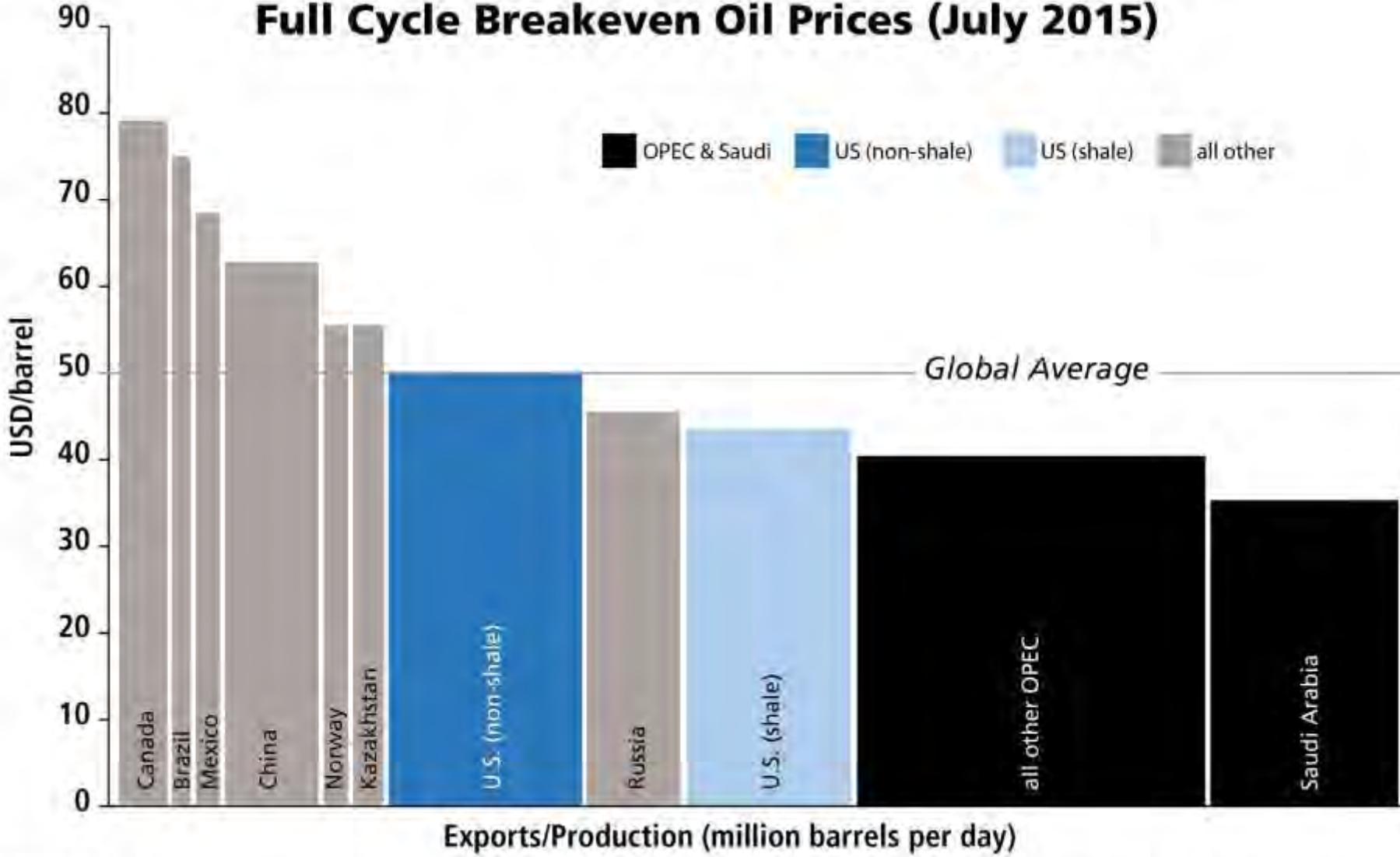


Shale New World (Oil)



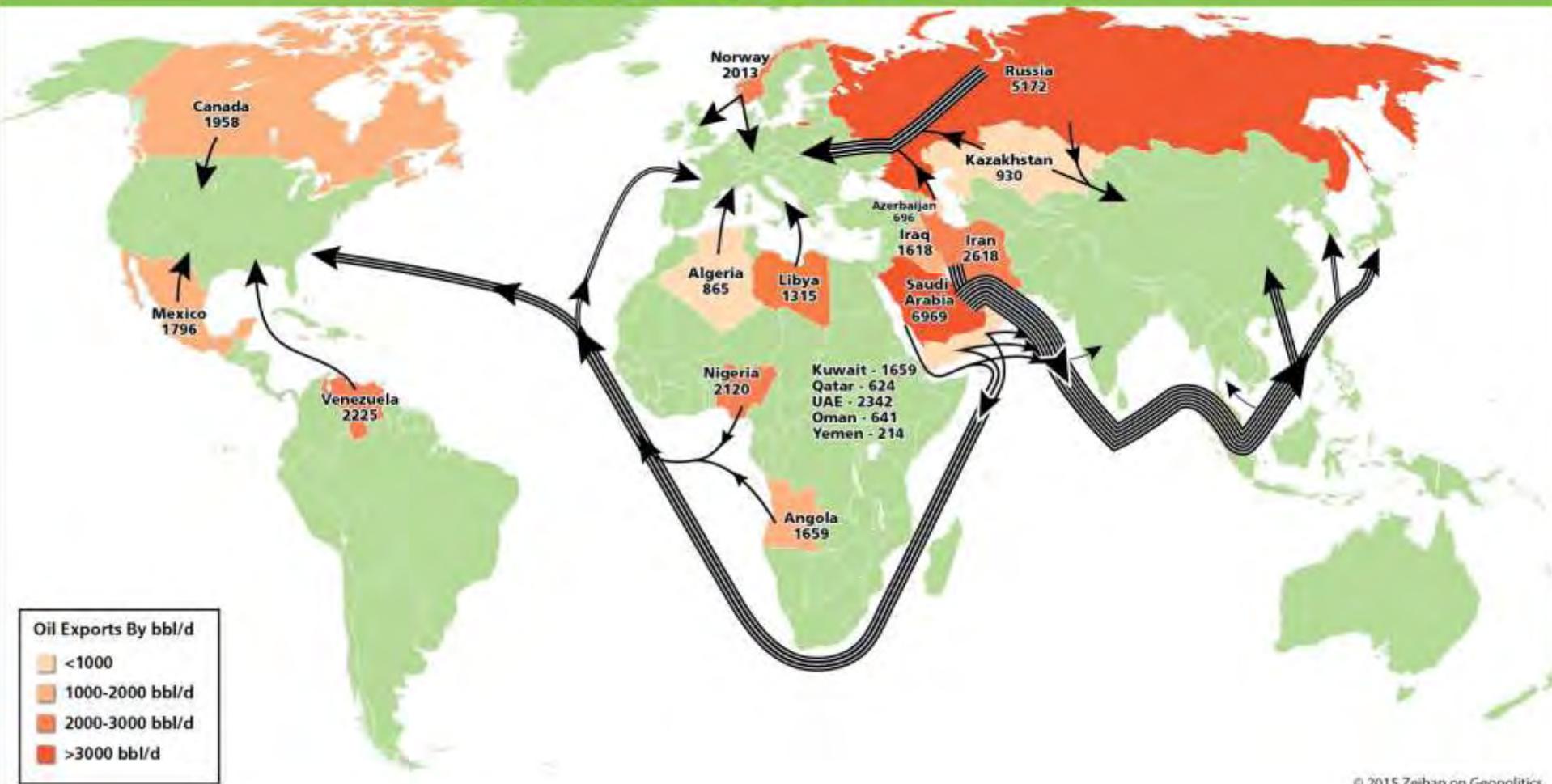


Full Cycle Breakeven Oil Prices (July 2015)



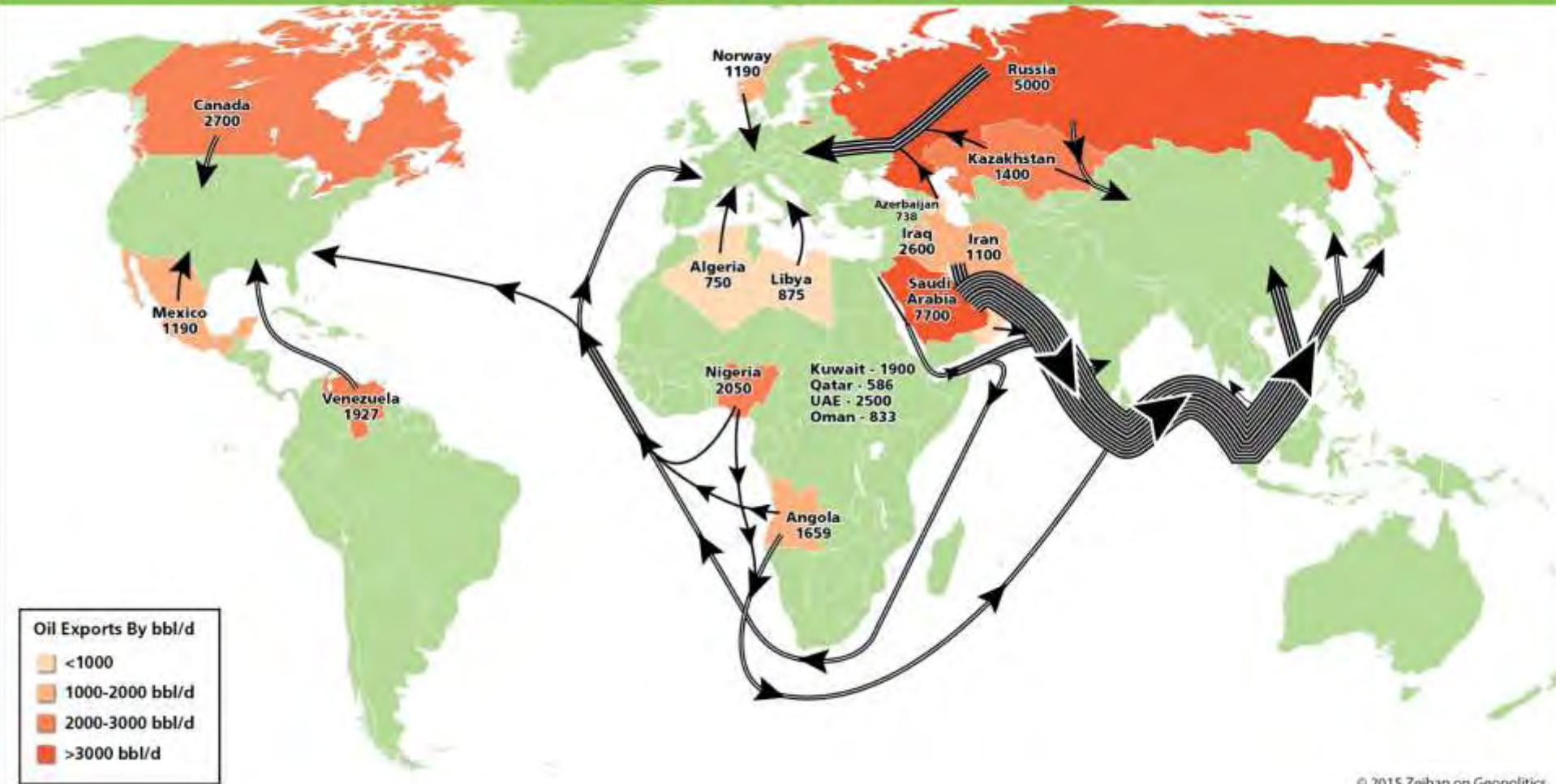
The Asian Premium

Top Oil Exporters 2007

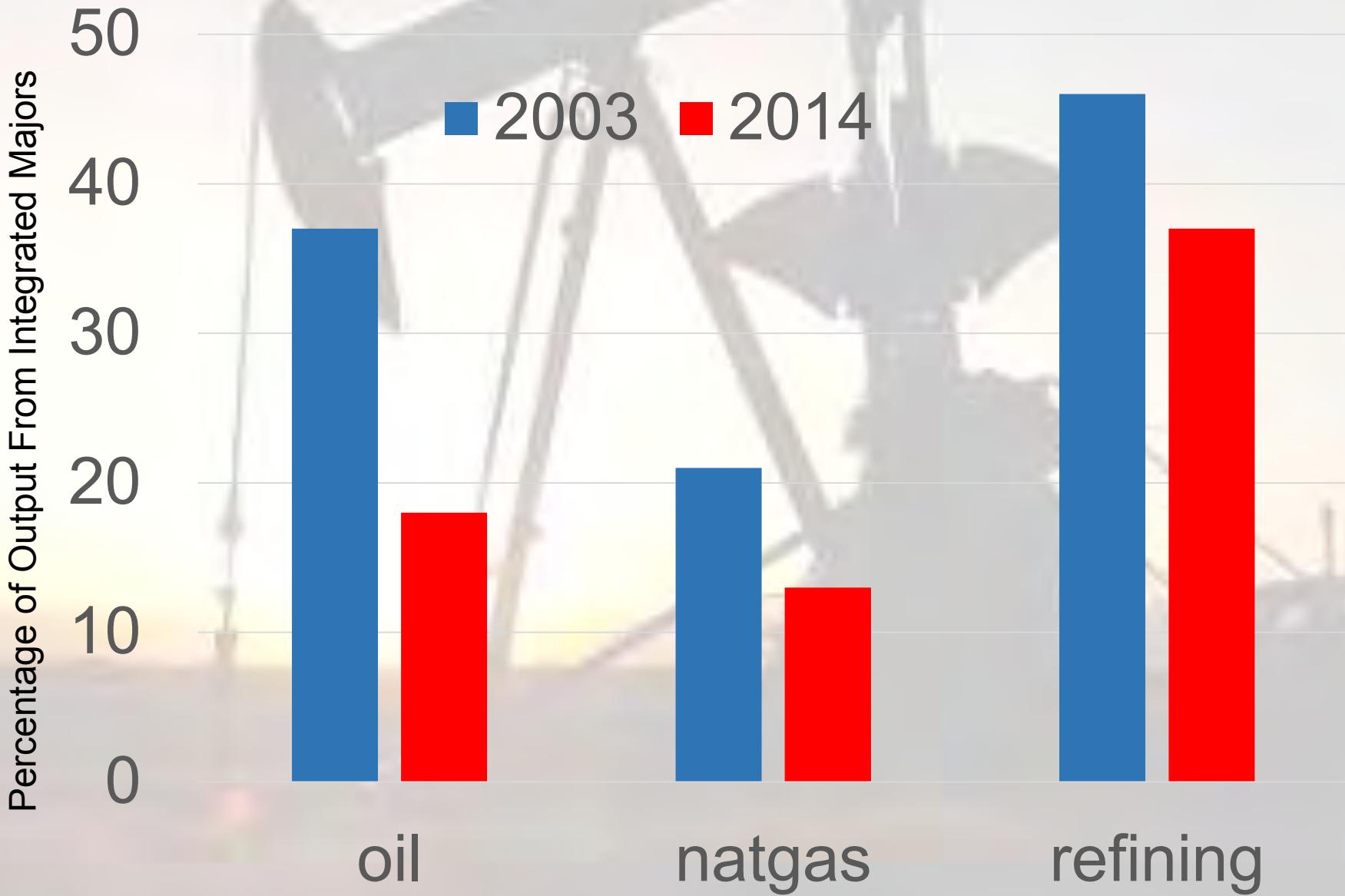


The Turning Point

Top Oil Exporters 2013-2014

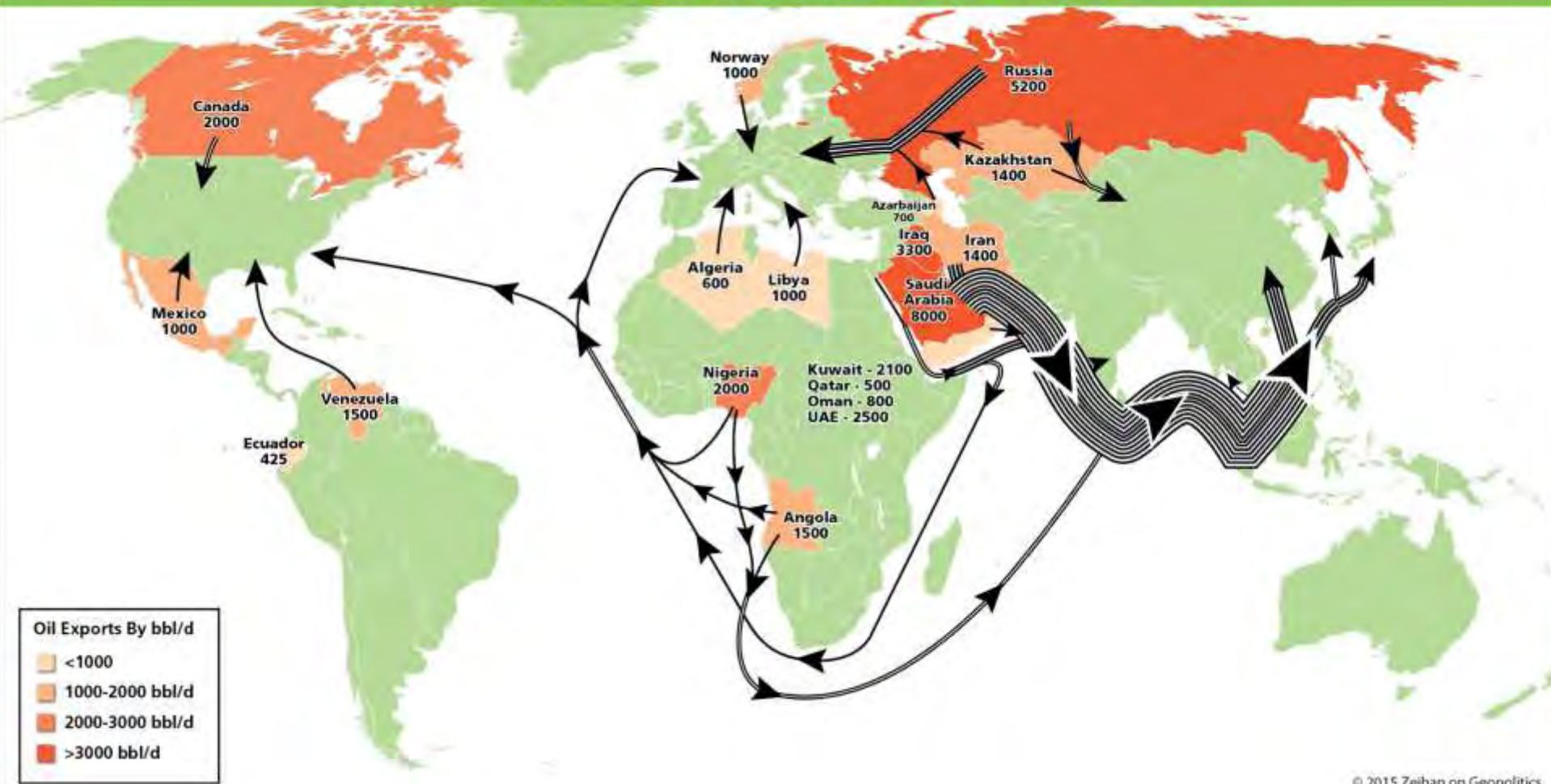


Sector Thoughts: Supermajors



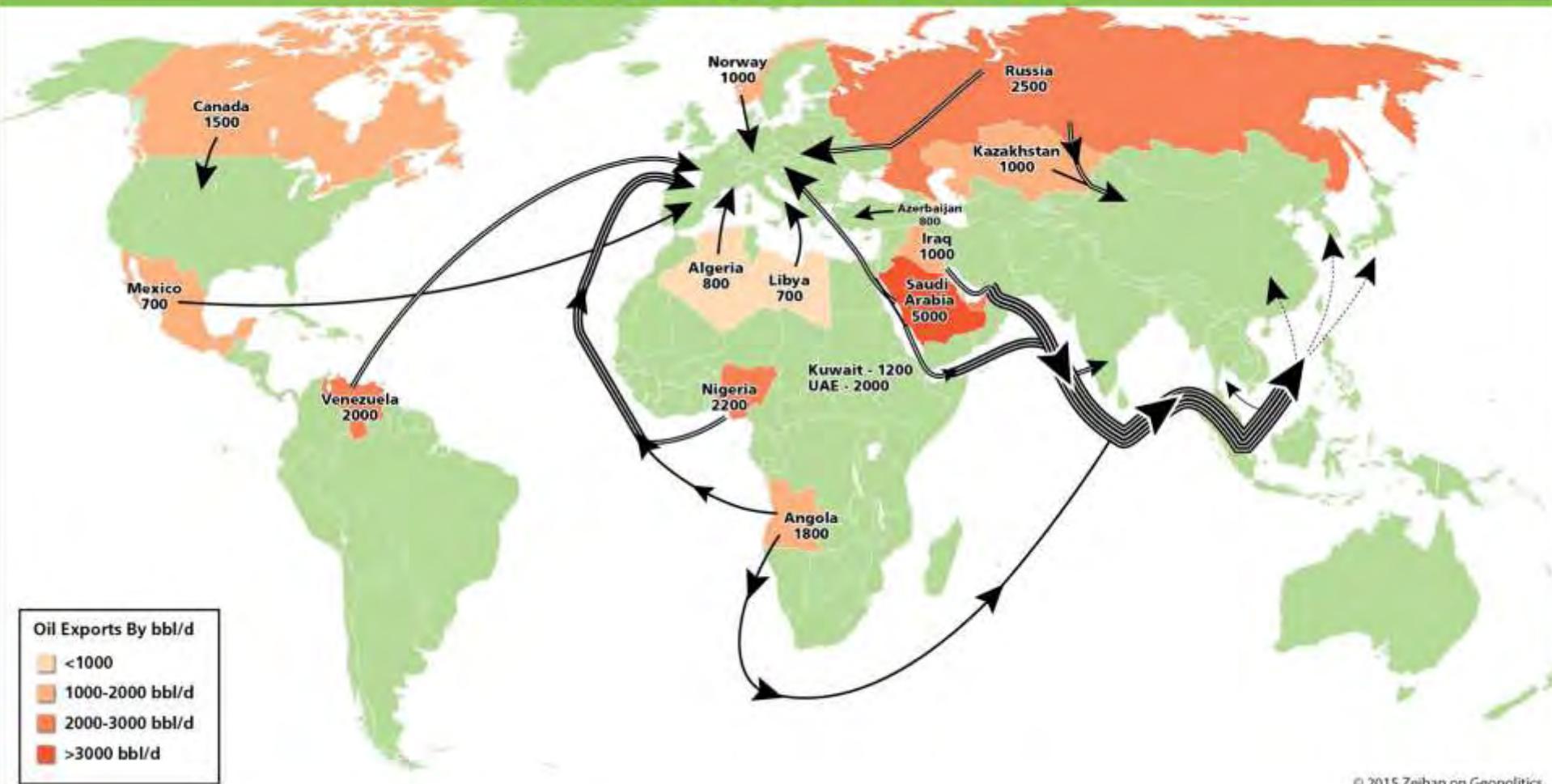
The Asian Discount

Top Oil Exporters 2016-2017



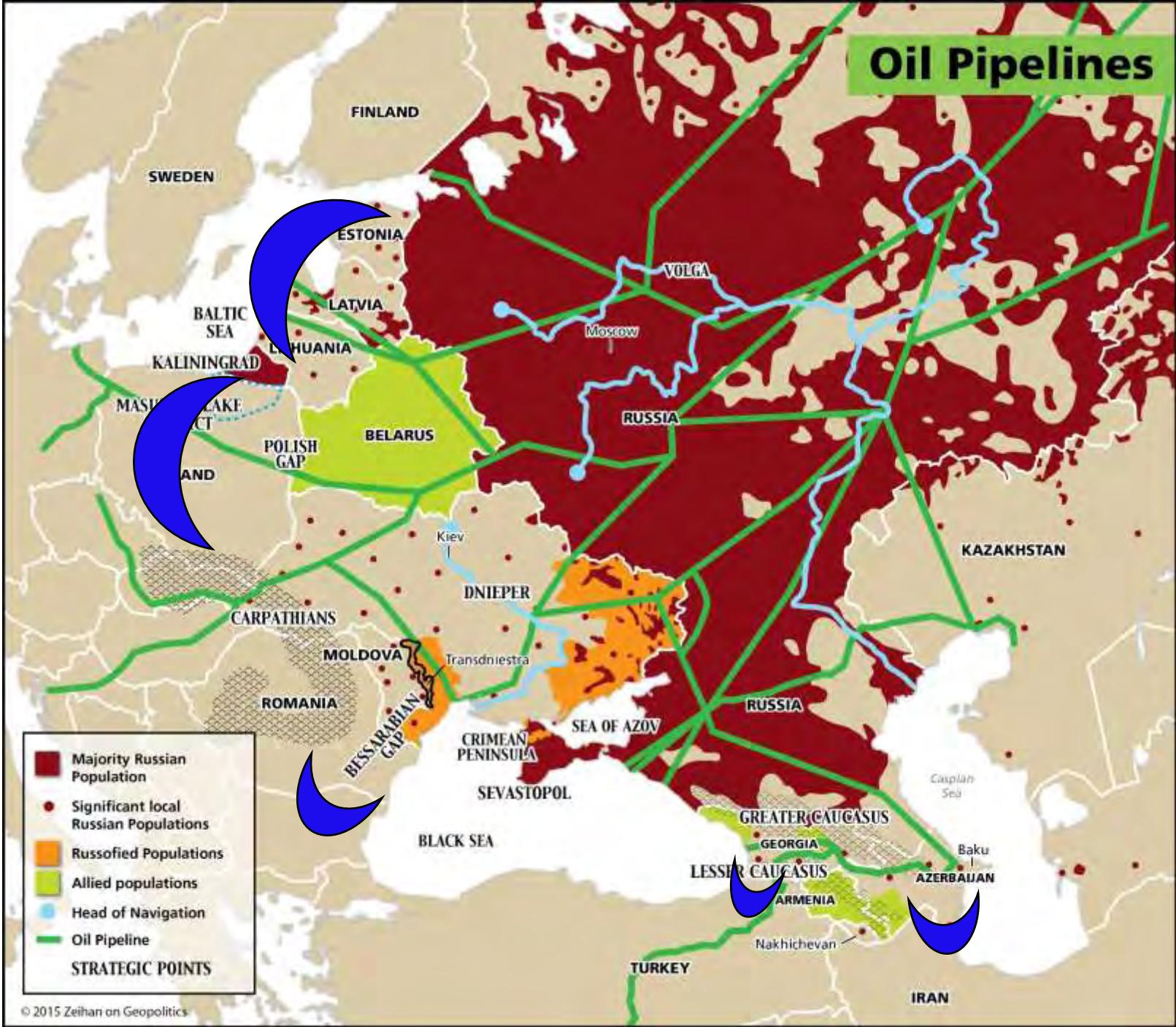
The Asian Invasion

Top Oil Exporters 2020



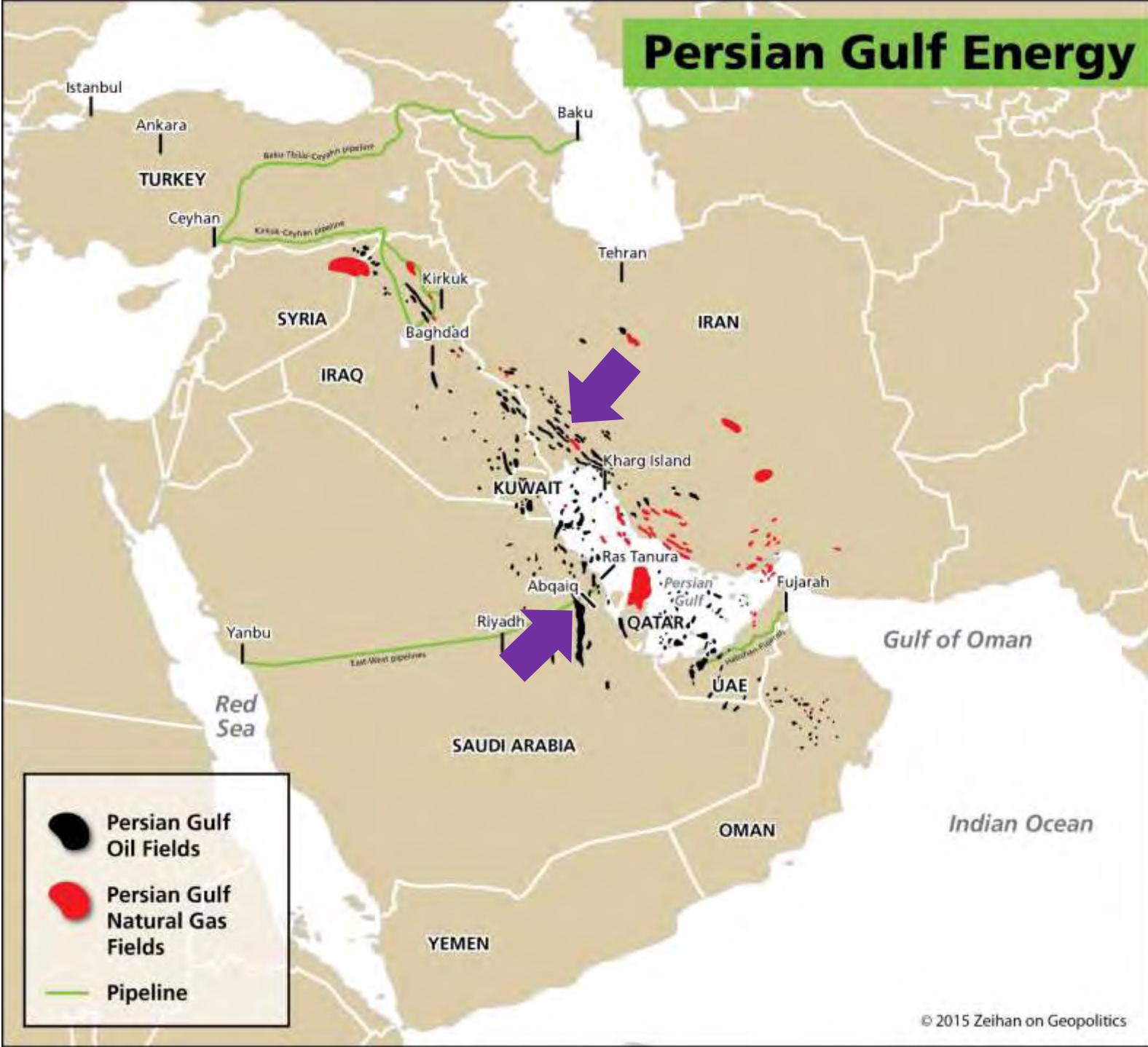
Trigger:

The Russian Cleave

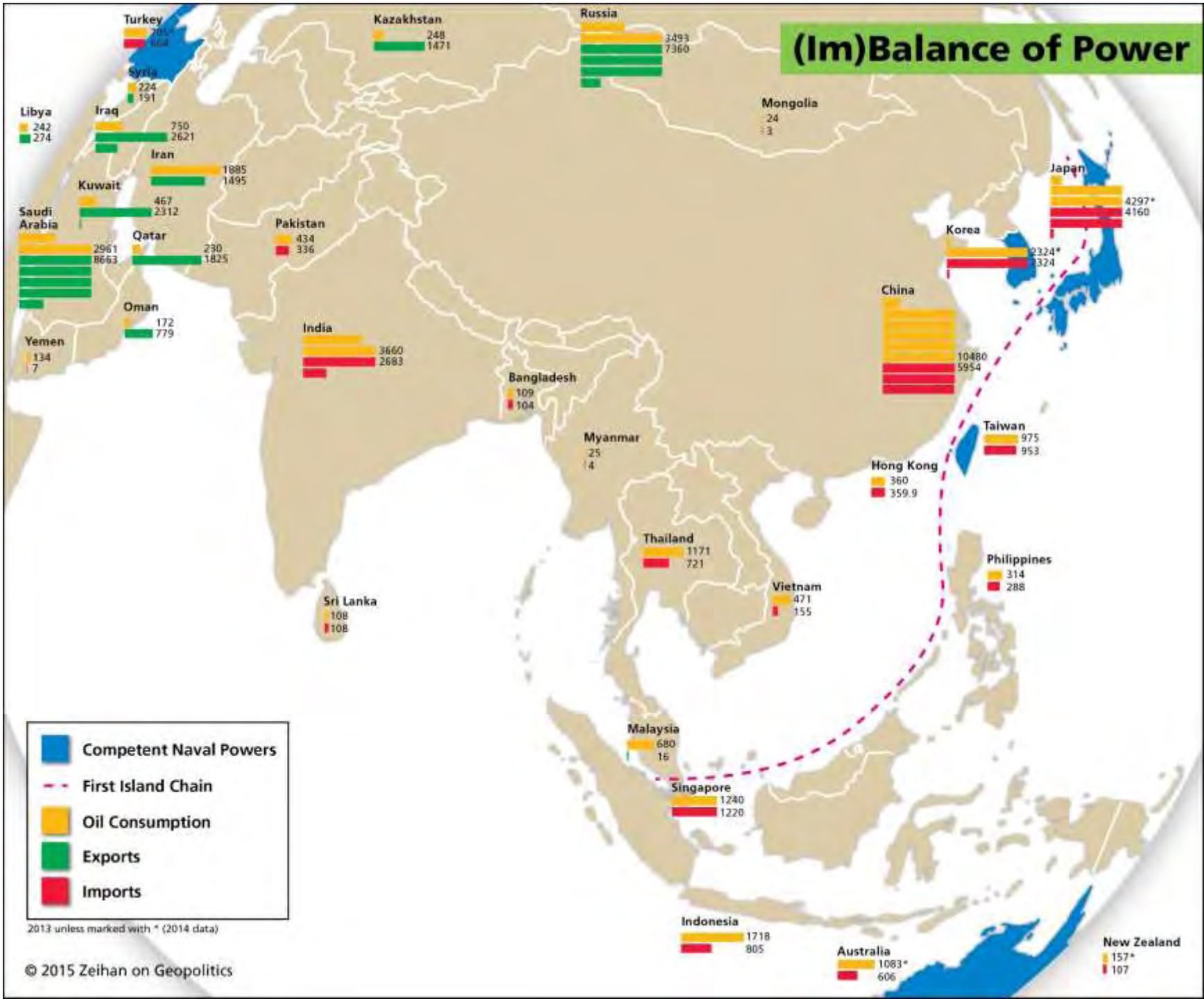


Trigger: Mideast Realignment

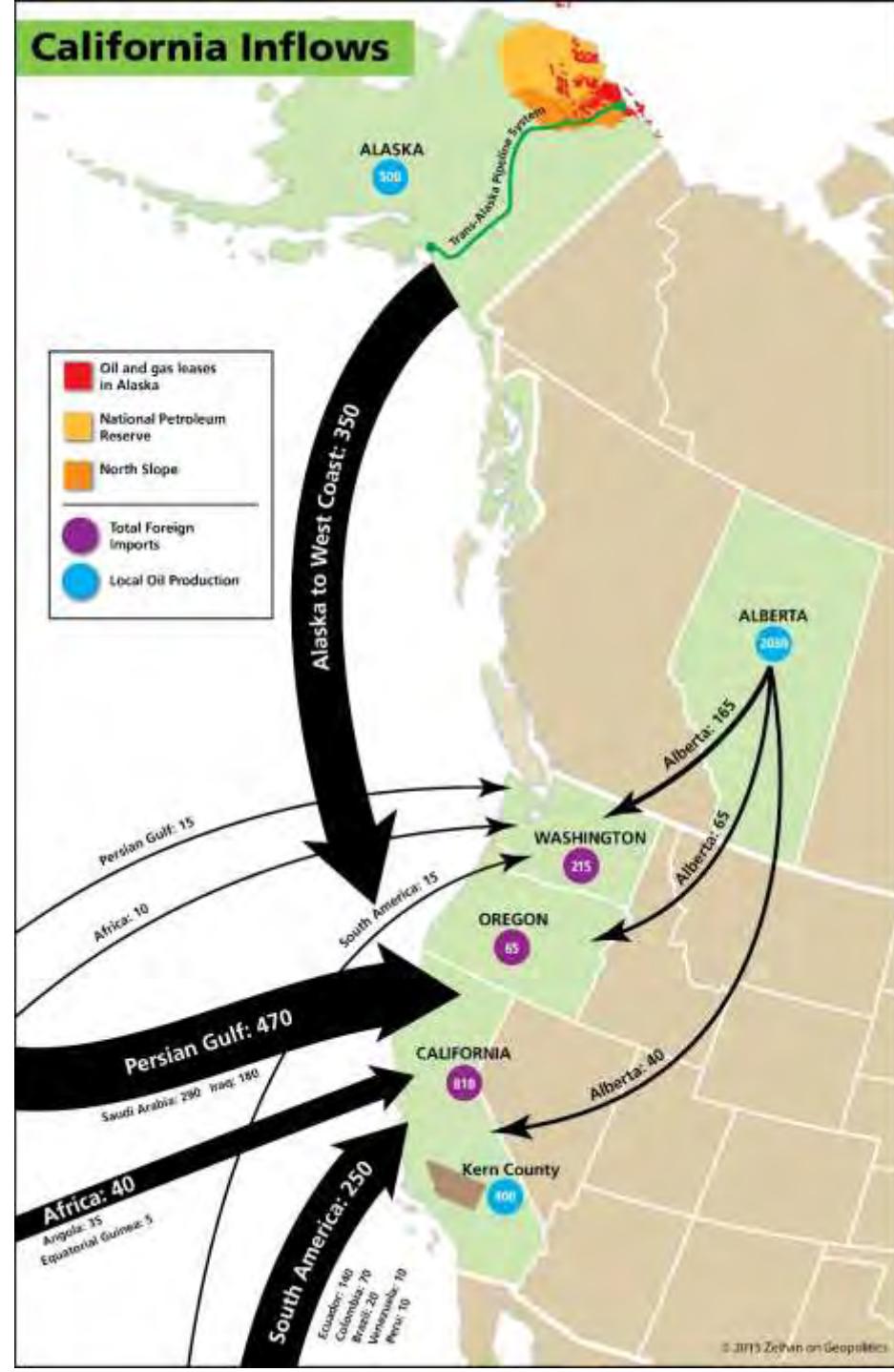
Persian Gulf Energy



Trigger: Asian Spillover

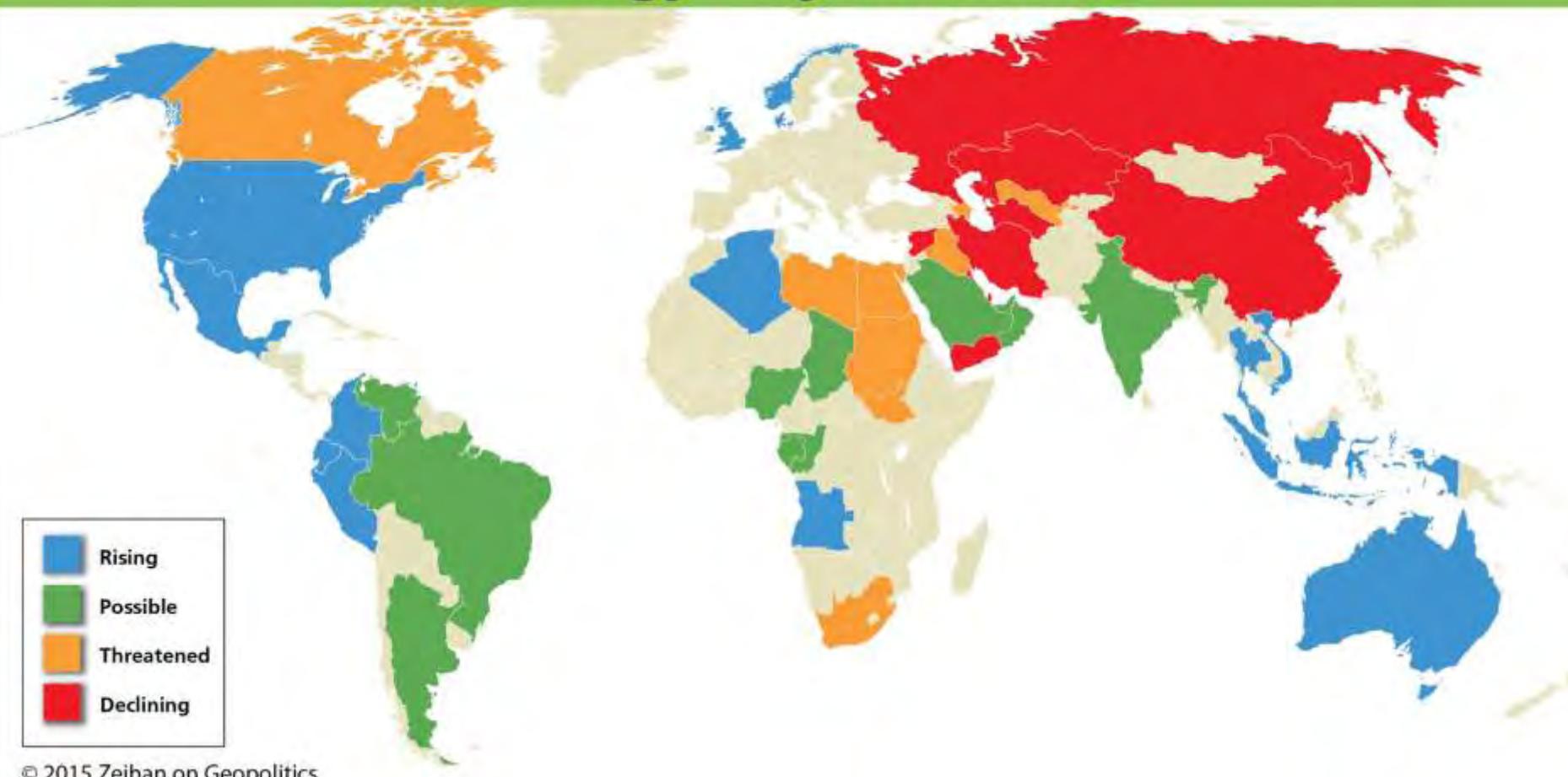


The California Premium



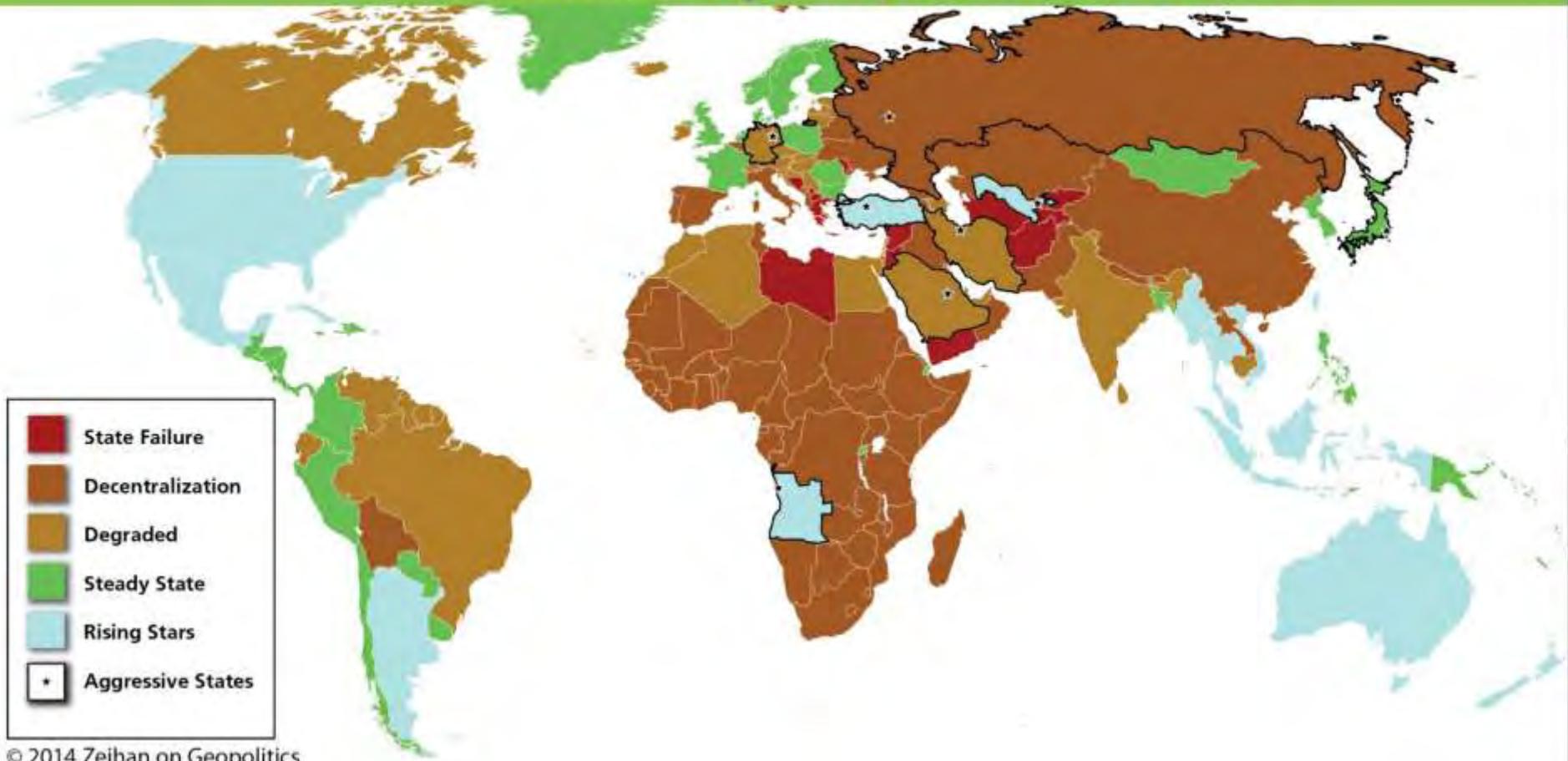
Supersizing Global Oil

Energy Plays of 2025



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Global Stability Map: 2015-2030



Trigger: Canadian Energy

North American Shale

