## THE HIGH ARCTIC Songs of a tribe on the edge

Story World Pitch - Alex McDowell's "Planet JUNK" Collaboration - 2021 - Matt Rasmussen - www.spacetoast.net



## 500 Years of Climate in 2 Minutes

#### \* In 500 years, what will the climate be like in the high arctic?

- \* At least twice the warming of the planetary average. [Ref]
- \* Much greater rainfall. Little or no icepack in summer. Melting & dislocation of formerly permafrost soils. [Ref]

#### \* Consequences of societal collapse on the climate?

\* "Setting all emissions to zero would therefore, after a short warming, lead to a near stabilization of the climate for multiple centuries." [lbid]

#### \* So back to normal?

- \* No, warmer is the new normal. It'll level off where it was left, for thousands of years. [lbid]
- \* What about sea levels?
  - \* 6.5' (2 meters) in 500 years, due to thermal expansion and reduction in land ice. [Ref]

#### \* What if there's a war?

\* "Even the relatively small India–Pakistan war would have catastrophic effects on the rest of the world... Over the course of five years, maize (corn) production would drop by 13%, wheat production by 11% and soya-bean production by 17%." [Ref]

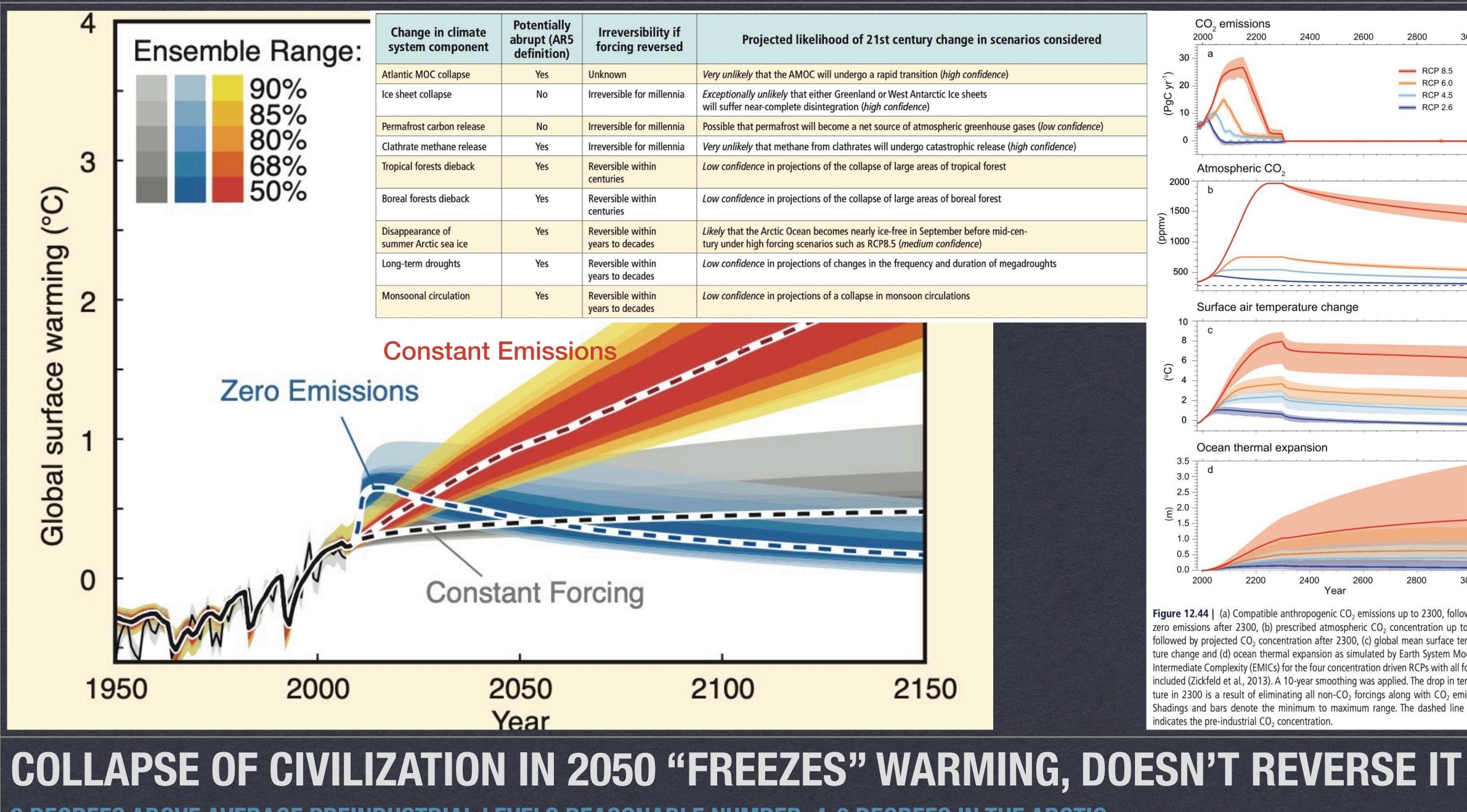
#### **\*** But will it affect the climate long-term?

- \* No, although there will be a significant drop in temperature for 5-10 years. [Ref]
- \* A limited nuclear war would release about 700m tons of CO2 into the atmosphere. [Ref]
- \* This is not signifigant, as annual release is 33.5 billions tons. [Ref]

#### \* Will fish stocks recover?

\* WWII suggests yes. Small fish can double in biomass annually. Larger fish, if not extinct, can recover. [Ref]





#### Projected likelihood of 21st century change in scenarios considered

Very unlikely that the AMOC will undergo a rapid transition (high confidence)

Exceptionally unlikely that either Greenland or West Antarctic Ice sheets

Possible that permafrost will become a net source of atmospheric greenhouse gases (*low confidence*)

Very unlikely that methane from clathrates will undergo catastrophic release (high confidence)

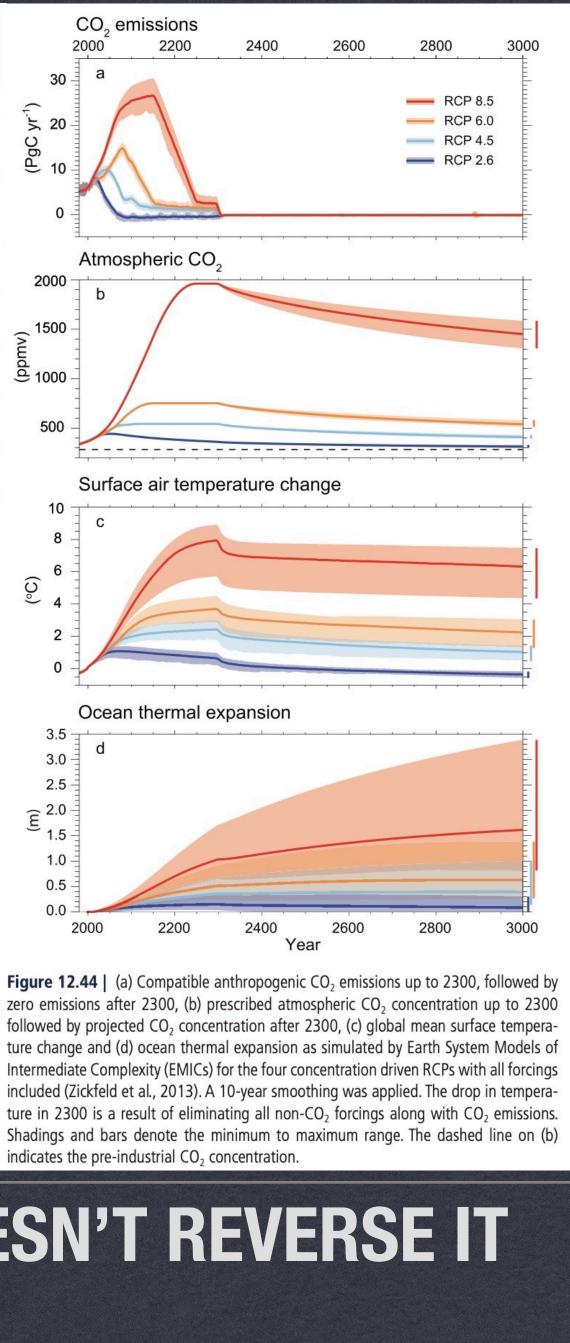
Low confidence in projections of the collapse of large areas of tropical forest

Low confidence in projections of the collapse of large areas of boreal forest

Likely that the Arctic Ocean becomes nearly ice-free in September before mid-century under high forcing scenarios such as RCP8.5 (medium confidence)

Low confidence in projections of changes in the frequency and duration of megadroughts

Low confidence in projections of a collapse in monsoon circulations



indicates the pre-industrial CO<sub>2</sub> concentration.

## **2 DEGREES ABOVE AVERAGE PREINDUSTRIAL LEVELS REASONABLE NUMBER; 4-6 DEGREES IN THE ARCTIC**



# Timeline 2020-2050

### "Tomorrow never comes until it's too late." -Brian Farrell

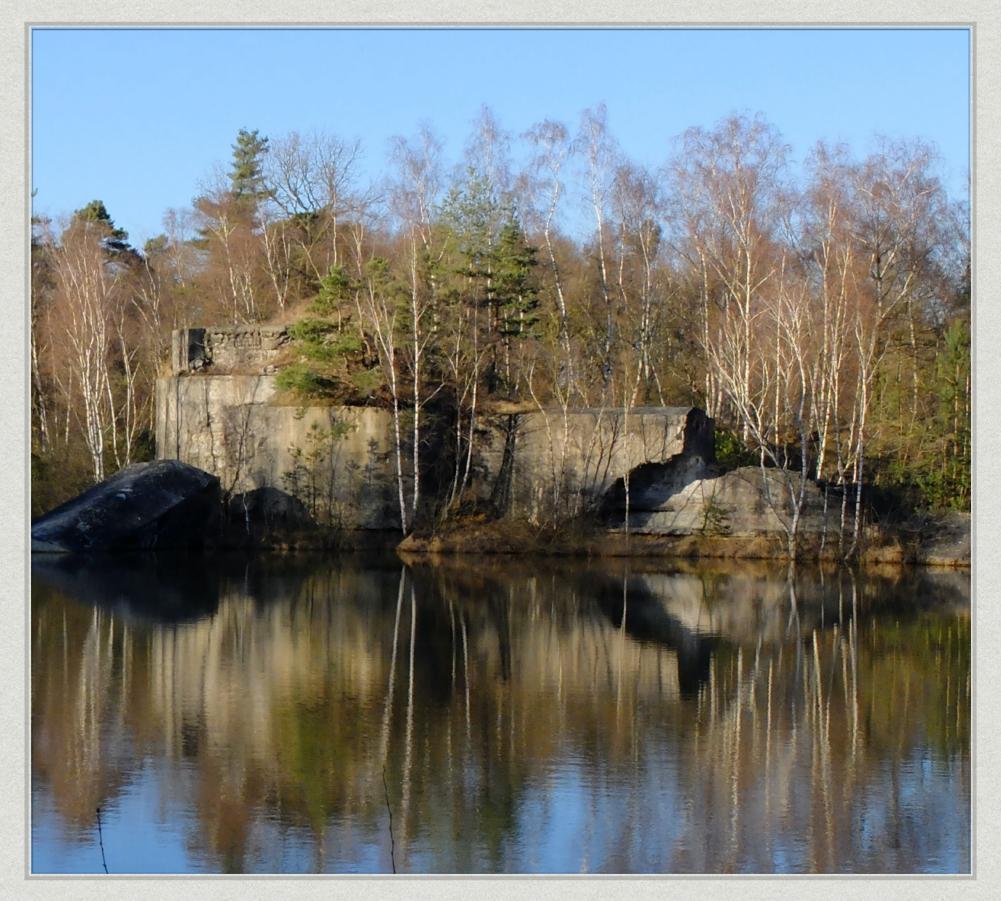
- \* 2020: COVID-19 pandemic begins
- \* 2023: "Central African" COVID-19 variant with 60-80% mortality rates causes widespread collapse of Sub-Saharan Africa and MENA regions, effectively bankrupts India, Southeast Asia, Indonesia and Phillipines.
- \* 2025: Fifteen year drought begins in American & Canadian breadbaskets, California's Central Valley.
- \* 2028: Meltdown of the Kaliningrad Nuclear Power Plant; Russia "walks away" from Kaliningrad Oblast, destabilizing Lithuania and Poland, declining as a superpower.
- \* 2029: Second American Civil War begins with Inauguration Day Assassinations; USA fragments. China invades Taiwan, continues to expand into South China Sea.
- \* 2030: "Airburst" strategy, small nukes on commercial rockets detonated in upper atmosphere, destroys power grids & most electronics in North America. Canada, Mexico, Guatemala, Belize & Honduras collapse.
- \* 2031: Seven year drought begins in northern Europe & Ukraine. Australian drought intensifies.
- \* 2032: Winter storms destroy flood barriers in England, Germany and the Low Countries, leading to large death tolls and mass migrations. Authoritarian regimes in Hungary, Latvia, Lithuania, Poland, Belarus & Romania ally into "Iron Fence" bloc.

- \* 2033: Greater Baltic War begins, soon drawing in Greece, Turkey and Romania.
- 2035: Russia disintegrates into warring states; airbursting and climate effects cause collapse of former Warsaw Pact nations. Iron Fence survives, absorbing Finland, Slovakia & Moldova. Moldova & allies invade Izmail Oblost to take Baltic ports, meld into Baltic War. Odessa, Izmail, Galati & Chisinau nuked. Straits of Bosporus destroyed by hydrogen bombs.
- 2036: Nuclear "autumn" from limited nuclear exchanges previous year; Worldwide crop failures for next four years lead to widespread famine and unchecked pandemics. Remaining national governments in Europe & South America collapse.
  Korean War flares up, drawing in Japan, China and Russia's former Pacific ports.
  Mass use of coal and deforestation push CO2 past 700ppm, erasing "pause" from social collapse.
- \* 2040s: New power centers try to expand, touching off loosely-connected, shifting conflicts between warlords, with widespread use of WMDs. Newly immobile populations succumb to rolling droughts and environmental exhaustion. 95% of farmland destroyed.
- \* 2050: Human population below 1 million. Auckland, New Zealand world's largest city at 40,000.
- \* Over next century, city states devolve into hereditary despotism. Religion, medicine & alt med merge. Literacy rates fall below 1%.



# When Does Our Stuff Disappear?

- \* Weeks: Power & water systems fail
- \* 3 years: The ISS burns up
- \* 5 years: Roads overgrown
- \* 10 years: Oil platforms sink
- \* 20 years: Magnetic media & devices to read it dead
- \* 25 years: Most dams & suspension bridges collapse
- \* 50 years: Most steel, reinforced concrete and wooden structures fail
- \* 100 years: Sun-exposed plastic crumbles
- \* 150 years: Cut & cover (subway) tunnels collapse into gullies
- \* 500 years: All upright traces of (long-collapsed) skyscrapers gone
- \* 2000 years: Arctic pipeline sections remain (low corrosion rates in cold climate)
- \* >2000 years: All-stone construction like cathedrals, unreinforced concrete structures still stand [Ref]



**WWI Belgian fortress** 





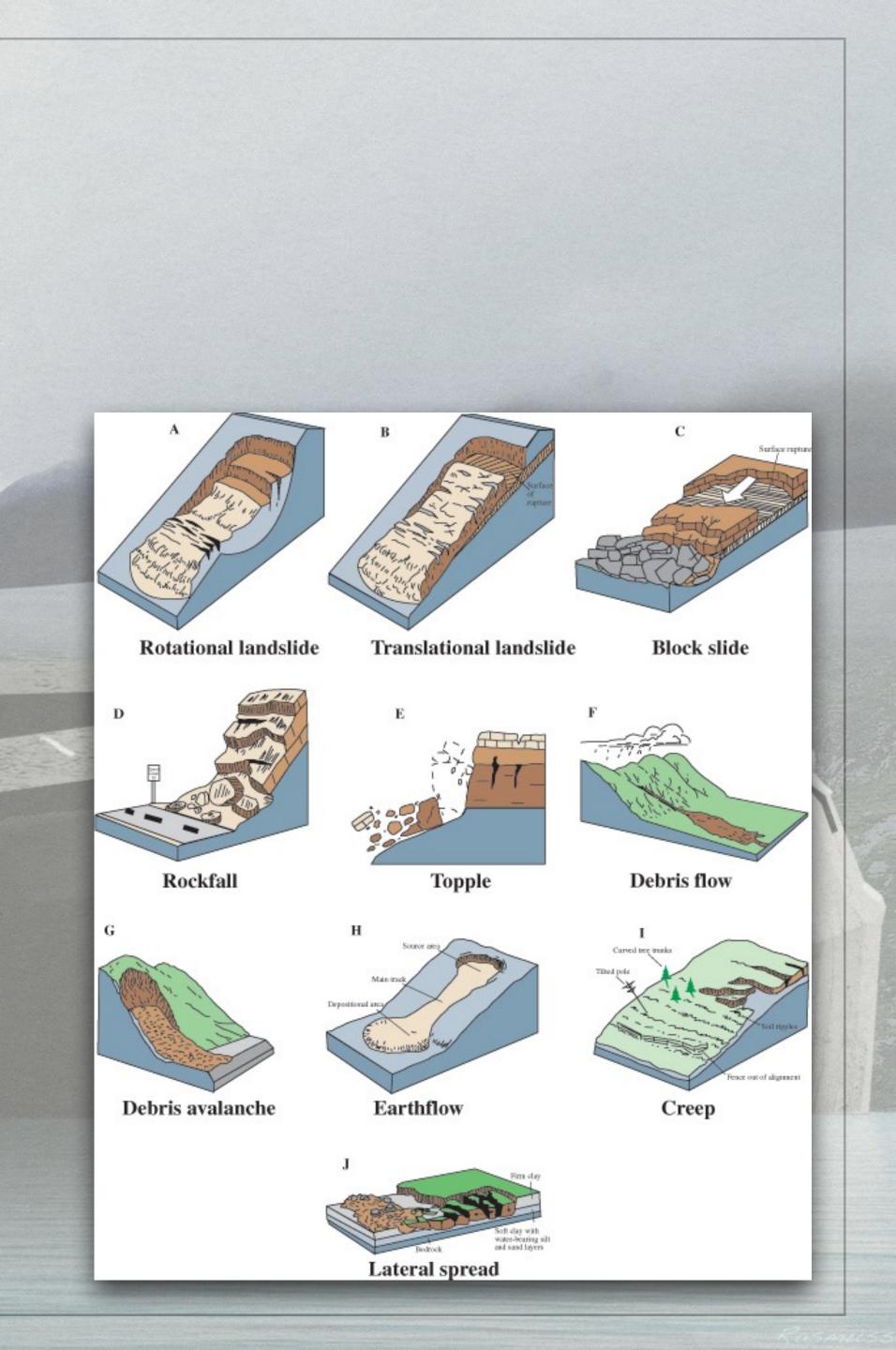
WHEN

# NORTHWEST GREENLANDSURVIVORS NEAR THE NORTHERN MOUTH OF NØRES STRÆDEABOUT 2500ADHOWFISHING & HUNTING





- \* 2040: Constructed by Russian-speaking expedition to control increasingly ice-free strait between Greenland and the Canadian Arctic Archipeligo.
- \* 2042: Abandoned. Speedcore construction resists elements better than reinforced concrete; arctic environment slows oxidation of steel plate. [Ref]
- \* 2100s-2300s: Isostatic rebound accelerated by reduced Greenland Ice Sheet tilts land under Base. [Ref]
- 2300s: Land creep from melted permafrost carries structure largely intact to the edge of the Arctic Sea. [Ref]
- Mid-2400s: Settled as a summer home/stronghold by fisherhunters of the Seagull Tribe.



#### Who are they?

- Short answer: An admixture of Greenlandic Inuit communities, Canadians, and others
- Real answer: Represent several pulses of immigration, large and small-as well as admixture, war, enslavement and refugeseeking

Normal enough story. Genetic populations have never been static, whatever nationalists would prefer to think

#### Why an Inuit lifestyle?

#### It works!

Fauna-based technological toolkit almost identical to what got our ancestors through 100,000 years of Ice Ace

Importantly, the Inuit ARE NOT descended from Ice Age Eurasians-at least, no more than we are

The toolkit re-evolves where it's needed

## from the "old world?"

- forms

Plenty of surviving copper from electical appliances. Worked into fishing/hunting/ war implements. Holds up well in marine environment if maintained.

#### Do they know their history?

Pieces of the 2K collapse can be discerned in stories

Like in Danish, "story" and "history" have merged into a single word

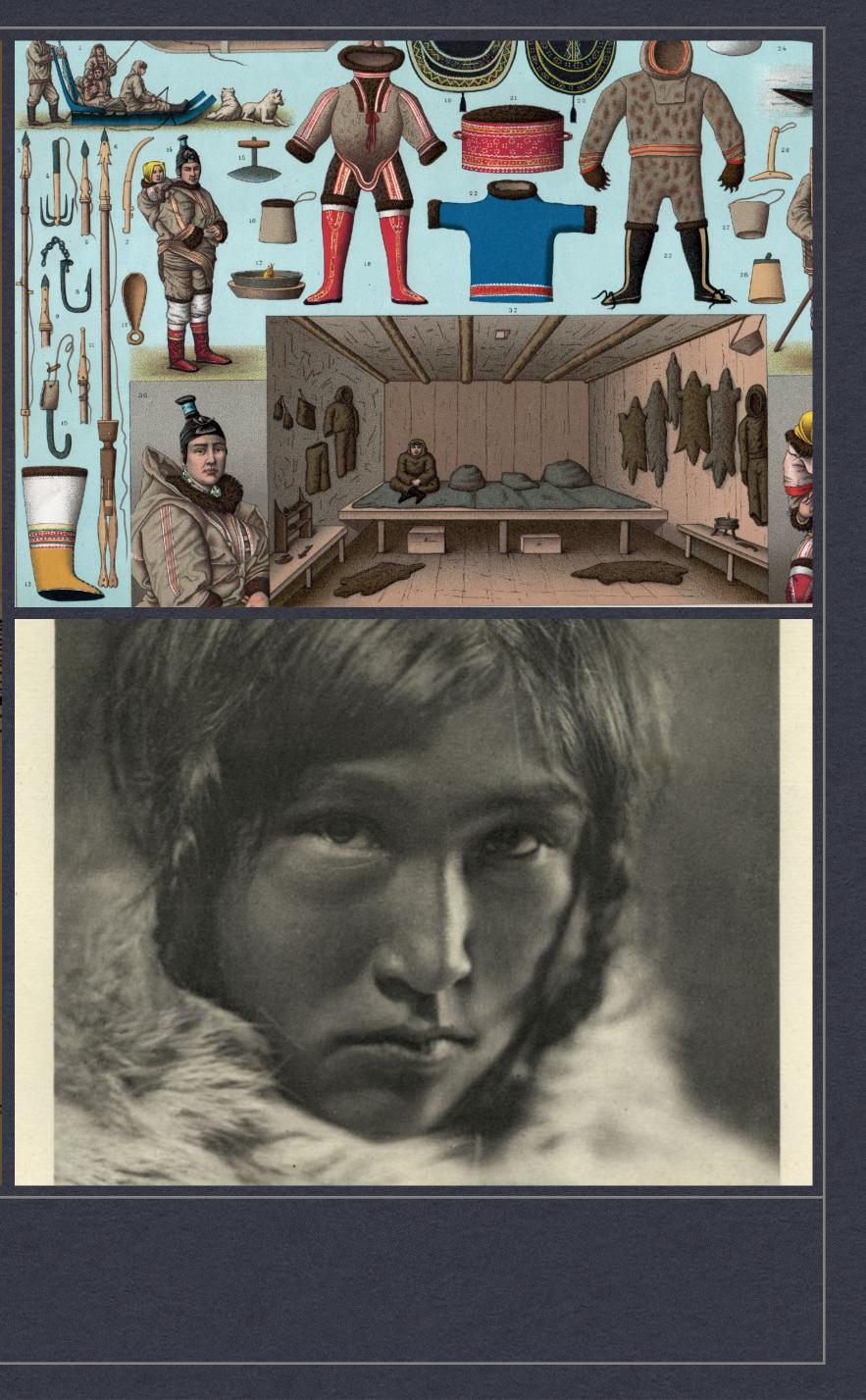
Real history and mythology are indistinguishable

## WHO ARE THE SEAGULL TRIBE? WHY DO THEY LIVE AS INUITS?

Aside from the Base, do they use anything

Much, although not all in recognizable

Plastic cracks and turns to powder over time in UV light, but some items survive mostly decoratively. Have found a way to sinter (heat without melting) small pieces together into watertight vessels.





## Language

- \* Creole (improvised language given a complete grammar by subsequent generations of speakers) of Greenlandic and English, with some words from Danish, Finnish and French
  - \* Subject-Object-Verb order like Greenlandic. Nearly 50% English vocabulary. Some sentences distinguishable to a modern English speaker.
  - \* No written form. Tribe is illiterate.
  - \* Cyrillic-derived decorative motifs popular, after surviving Base signage, but no knowledge that it was a written language.





"An elf-queene wol I love, ywis, for in this world no womman is worthy to be my make in towne; alle othere wommen I forsake, and to an elf-queene I me take by dale and eek by downe!" Into his sadel he clamb anon, and priketh over stile and stoon an elf-queene for t' espye, til he so longe hath riden and goon that he foond, in a pryve woon, the contree of Fairye So Wilde; for in that contree was ther noon that to him durste ride or goon, neither wyf ne childe... - English circa 1400

"An elf queen will I love. Indeed, for in this world, no woman is worthy to be my mate! All other women I forsake, and to an elf queen I commit myself, by dale and also by hill?" Into his saddle he climbed at once, and spurred over stile and stone to find an elf queen, until he had ridden and walked so long that he found, in a secret place, the country of Fairy So Wild. In that country there was no one who dared approach him, neither woman nor child..." -Modern English

-Geoffrey Chaucer, "Tales of Canterbury: Sir Thopas" [Ref]

# How Fast Does Language Change?



