

A Tale of Commons' Tragedies

A photograph of a large, jagged iceberg floating in the Arctic sea, with smaller ice floes scattered around it under a clear blue sky. The iceberg is the central focus, with a sharp, pointed peak. The water is dark blue, and the sky is a clear, bright blue. The overall scene is a stark, cold, and desolate landscape.

The Arctic

Today's agenda

- Review: The Problem of the global Commons
 - Tragedies of Climate change, Resource exploitation, conflict
 - National “enclosures” and absence of central authority invite conflict
 - Nature, Wealth, and Poverty
- The Arctic as a Case Study
 - A canary in the mine
 - Pollution exacerbates Arctic heating
 - Arctic heating opens economic exploitation
 - A Scramble for the Arctic: International tensions
 - Russia, Canada, Denmark, Greenland, China, United States, Indigenous peoples
 - Arctic Governance?

Tragedy of the Global Commons



The “tragedy of the commons” metaphor

- Think Planet Earth
- Think National Economic Growth
- Think Carbon Emissions, Climate Change, and Resource Depletion

First Tragedy: Climate Change



Because of climate change, the Consequences of Freedom + equal access are suboptimal

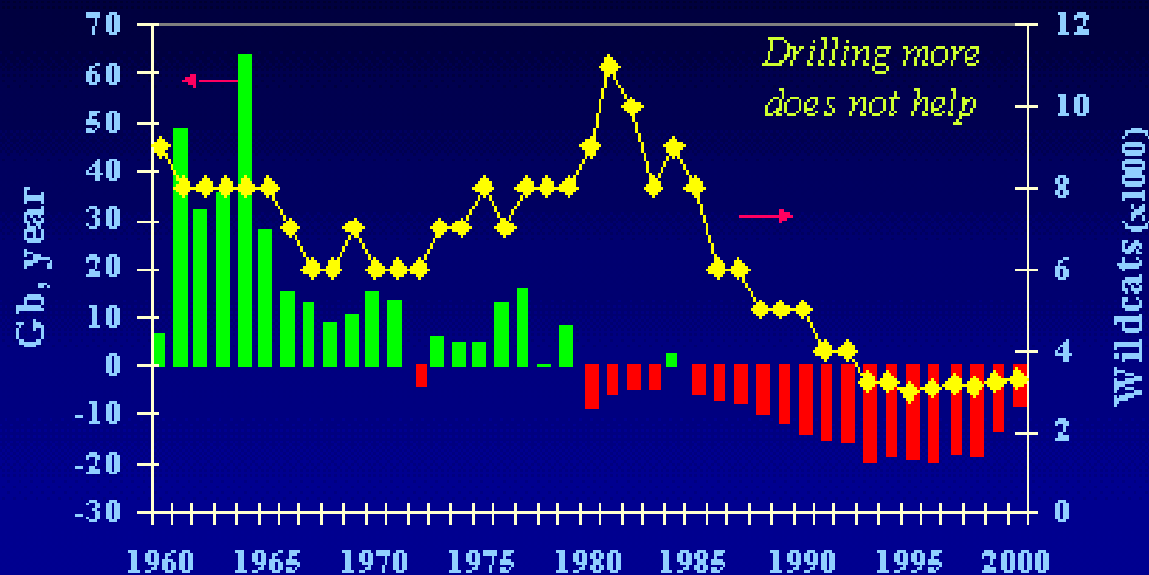


A Second Tragedy of the Commons: Resource exploitation



Declining supply of oil

The Growing Gap between Discovery and Production



Depletion leads to exploitation

New discoveries look promising...

- Brazil
- Gulf of Mexico
- Bakken shale (Montana)
- Arctic regions

- Sum: Climate Change and Dwindling Resources: An explosive combination and a double tragedy---
-back to the tragedy of the commons
- solutions to the tragedy:
 - Enclosures –use coase theorem to solve conflicts
 - Central Authority

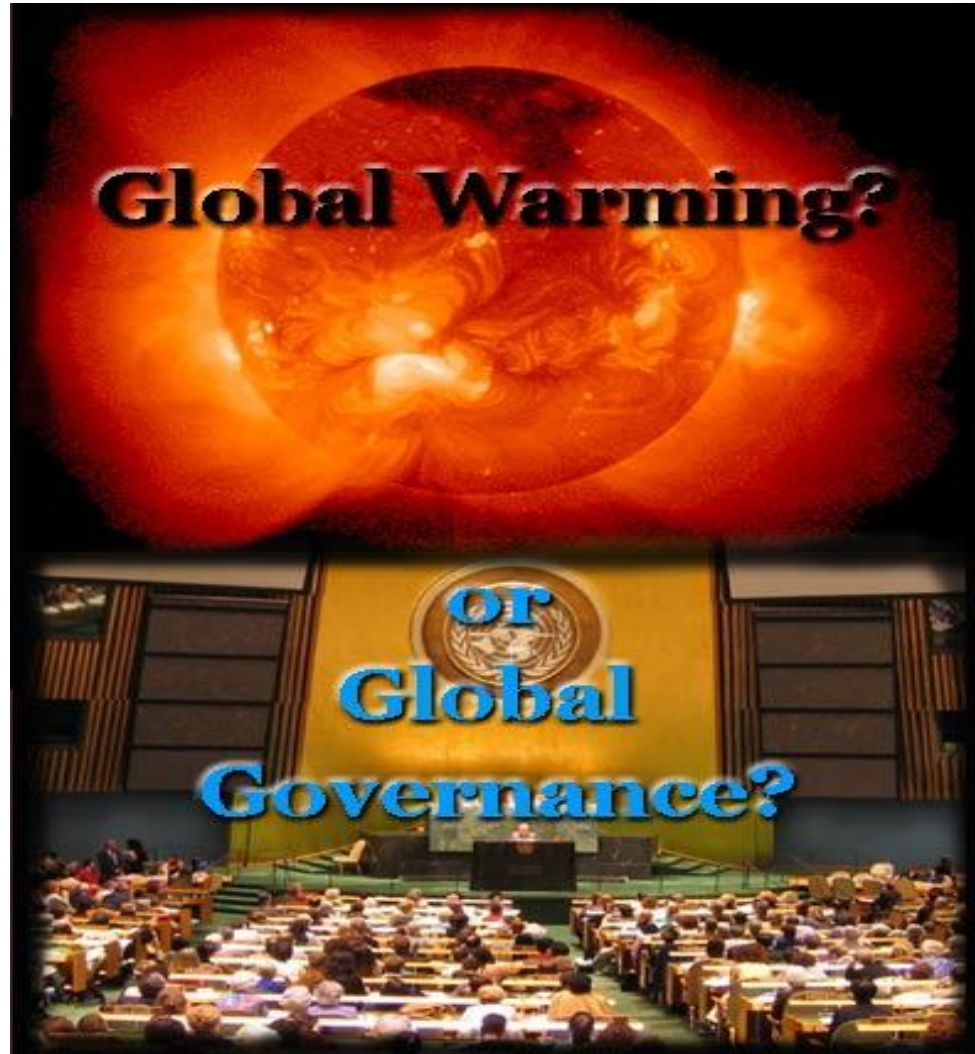
Attempts by states to “enclose” cause conflict

- “Climate change will make scarce resources, clean water, viable agricultural land even scarcer”—and this will “make the emergence of violent conflict more rather than less likely.”
 - » British Defense Secretary John Reid

But No central Authority to solve either climate change problems or resource depletion problems

- A central authority can either be
 - A leader, a single leader such as a nation-state; i.e. the United States after World War II
 - Can provide collective goods, pay the costs of cooperation
 - But as a nation-state, it can become an economic nationalist when things aren't going well for it
 - An institution, such as The UN, or the World Bank, orThe Kyoto Treaty
 - Can also provide collective goods and because there is a group of states that makes up the institution, no chance for the entire institution to become an “economic nationalist”
 - But suffers from the problems of “large groups” and has little enforcement capability

Kyoto Protocol



Without central authority: Military solutions to Climate Change problems?

- predictions about the coming environmental wars imply that climate change requires military solutions—a readiness to forcibly secure one's own resources, prevent conflict spillovers, and perhaps gain control of additional resources.



Darfur as warning sign



Another tragedy: Nature, Wealth, and Poverty



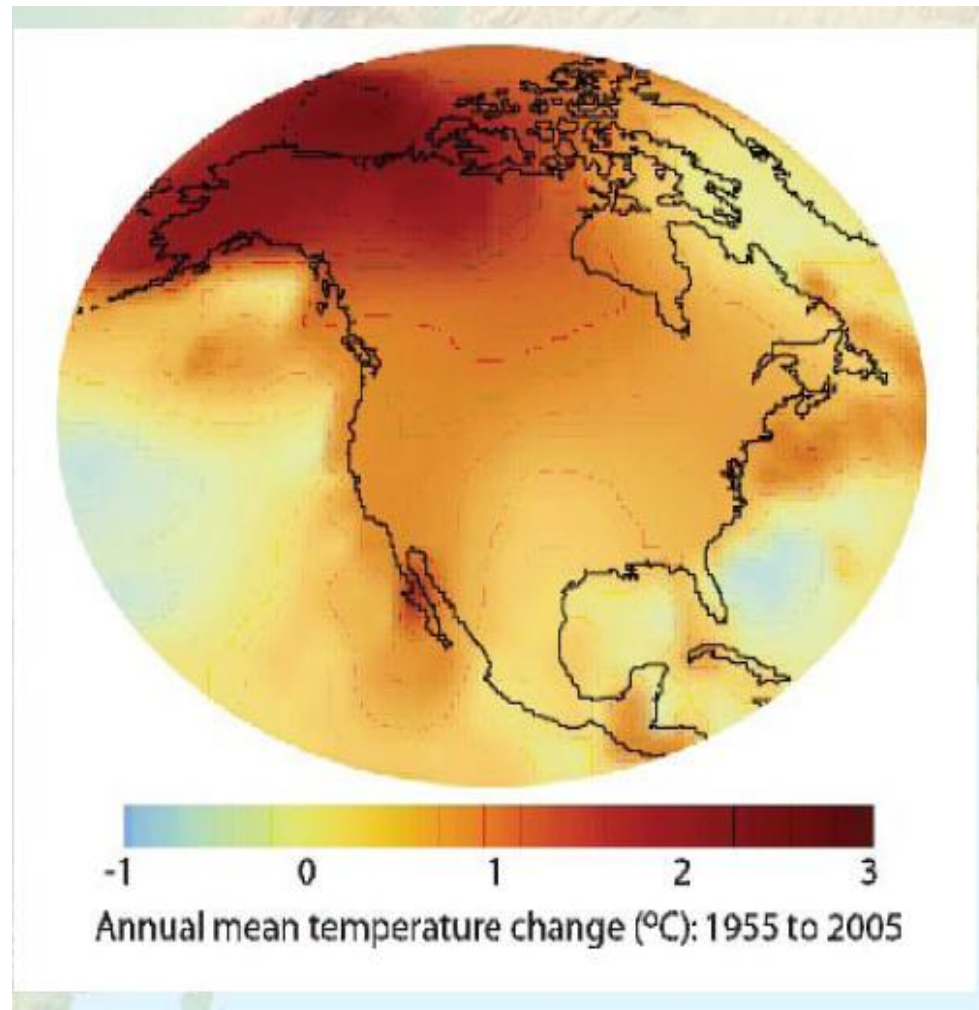
Arctic as Global Commons

- Arctic plays a key role in regulating global weather patterns, and, spurred by global pollution, it is warming
- And Resource exploitation issues are leading to international conflict
- Indigenous peoples suffer from both

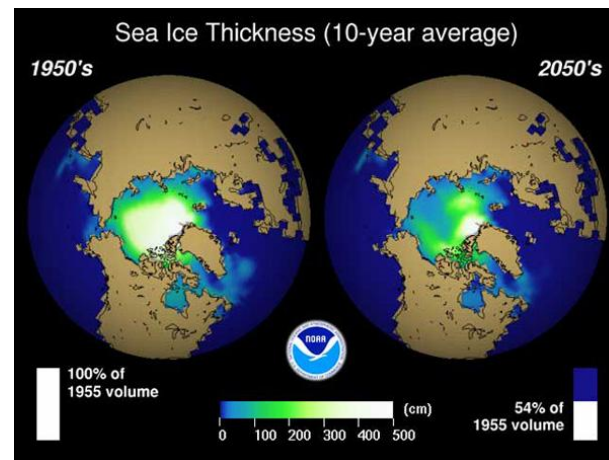
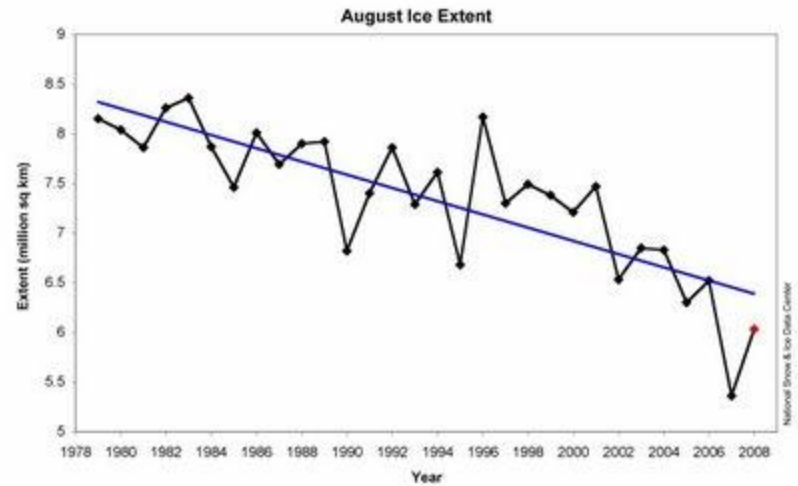
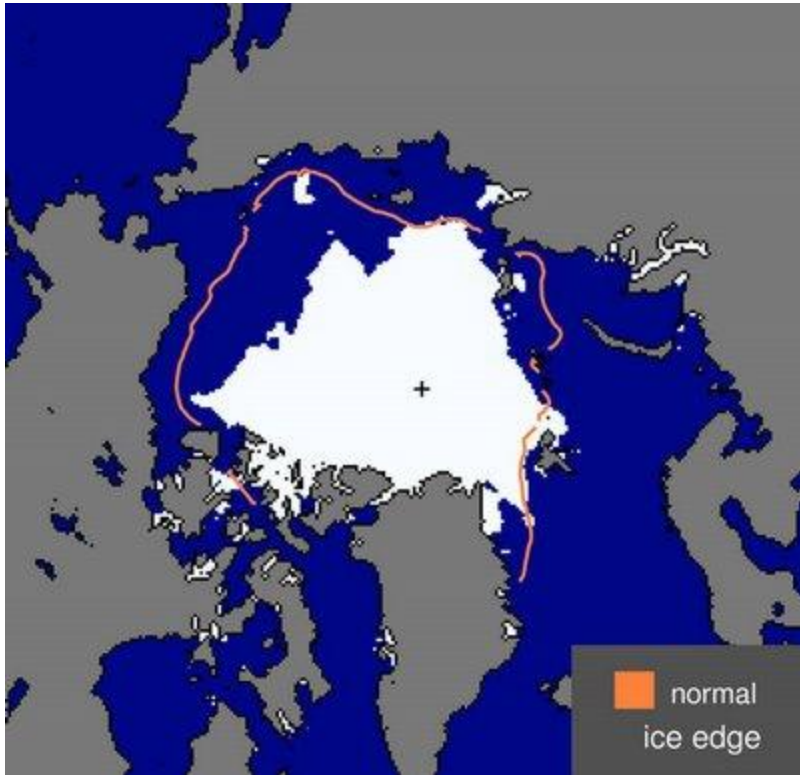
Arctic as Canary in the Mine



Arctic is heating up faster than the rest of the world.....

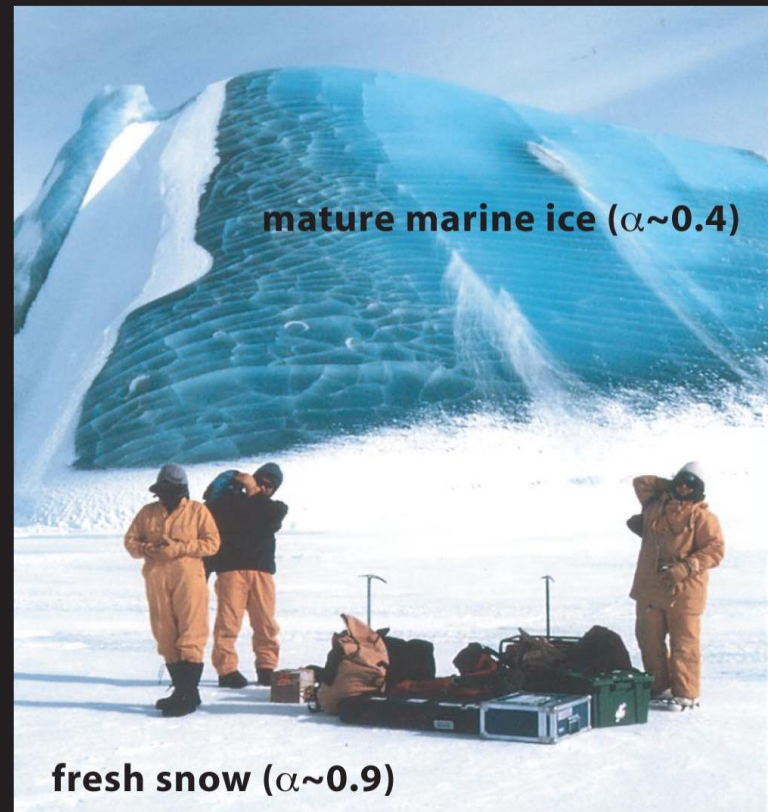
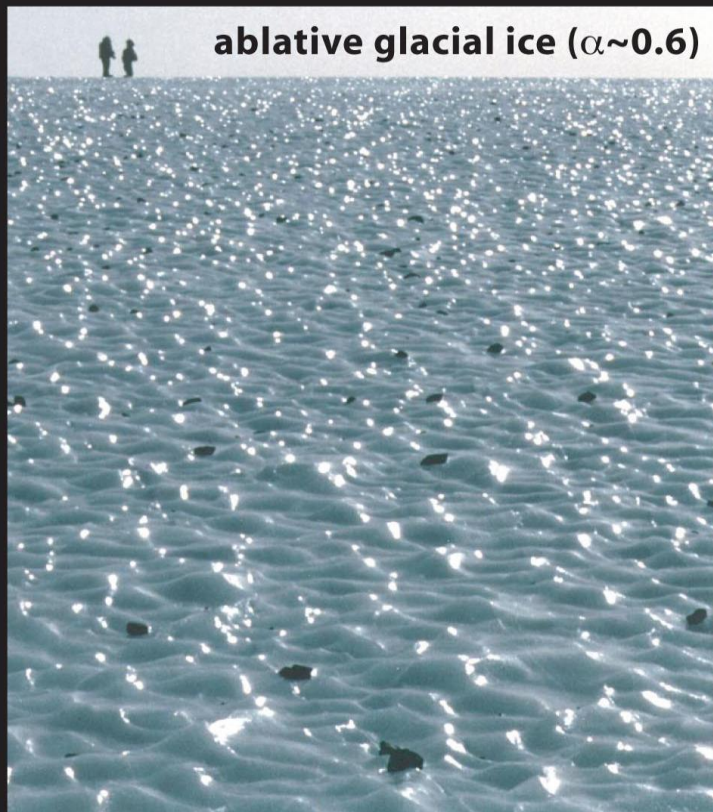


The Arctic Ocean is melting, and it is melting fast.



Why? Soot lowers reflectivity → Ice
Melts → sea absorbs heat

Ice albedo: critical parameter in snowball models



see Warren et al., JGR Oceans 107, 2002.

Steve Warren photos



Polar Bears endangered

Their lives depend on being able to hunt on the sea ice



Indigenous Peoples Harmed



Less Ice.....**More** Resources

- Less ice also means increased access to resources....
- And the collective action problem kicks in

the Arctic could hold the last remaining undiscovered hydrocarbon resources on earth. -- as much as one-quarter of the world's remaining undiscovered oil and gas deposits.



The Alaskan coast might one day look like the shores of Louisiana, in the Gulf of Mexico, lit up at night by the millions of sparkling lights from offshore oil platforms.

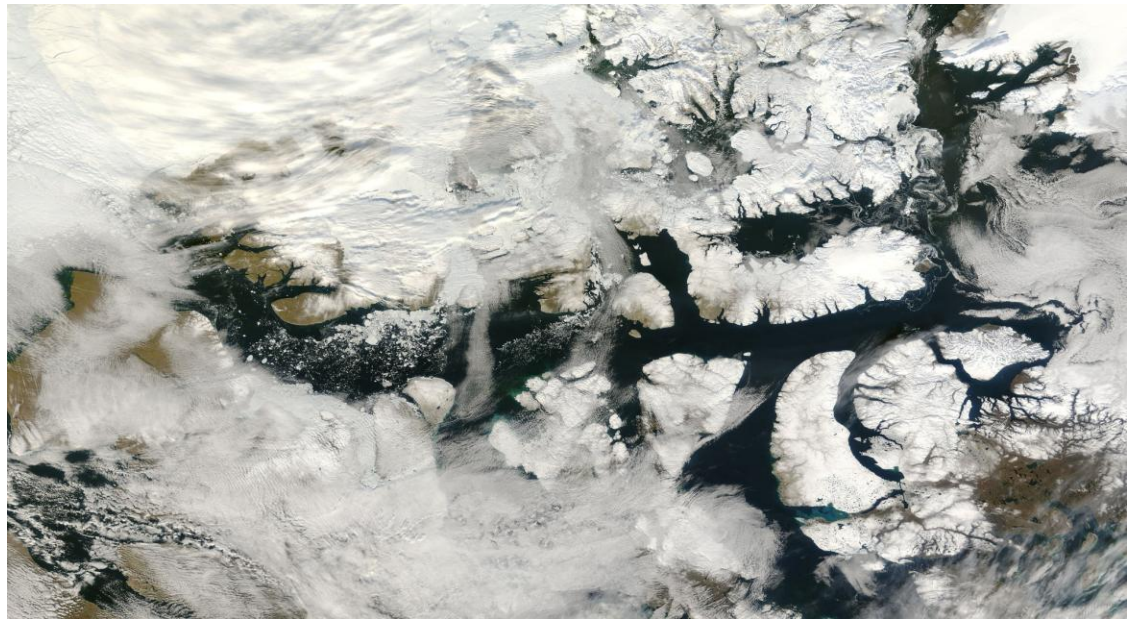


An even greater prize ... new sea-lanes created by the great melt.



trans-Arctic voyages possible within the next five to ten years.

- The Arctic is becoming like the Baltic Sea
- **ice-free Arctic in the summer as early as 2013.**
- What would opening the Northwest Passage actually mean?



Promise of new wealth → new enclosures of the Arctic Commons

Scramble for the Arctic

As climate change melts ice in the Arctic, several nations are vying for dominance of resources and shipping routes.



Source: National Research Council

MARK NOWLIN / THE SEATTLE TIMES

Russia dispatched a nuclear-powered icebreaker and two submarines to plant its flag on the North Pole's sea floor.



The dive was a symbolic move to enhance Russia's disputed claim to nearly half of the floor of the Arctic Ocean and potential oil or other resources there.

Why? Economic Nationalism!

- Russia argues that half of the Arctic Ocean is its rightful inheritance.
- an extension of Russia's continental shelf and thus Russian territory.
- , "The Arctic is ours and we should manifest our presence"

Santa Claus as a “common good” could be privatized



Canada: First principle of Arctic sovereignty is “use it or lose it”

- **Canada** claims Northwest Passage as its own internal seaway.
- Prime Minister Stephen Harper announced **funding** for new Arctic naval patrol vessels, a new deep-water port, and a cold-weather training center along the Northwest Passage.



*Arctic
Ocean*

Ellesmere Island

■ Hans Island

GREENLAND

NUNAVUT

*Baffin
Bay*

Hans Island



Greenland: a bid for independence?



China

- China.....



Indigenous Peoples Claims

- the Inuit of Canada
- Yakutsk people in Russia
- One Inuit man quoted as saying: “The Arctic sea is ours. It’s where we go for our food, our seals and whales. It’s always been ours, it’s ridiculous for anyone to think otherwise.”

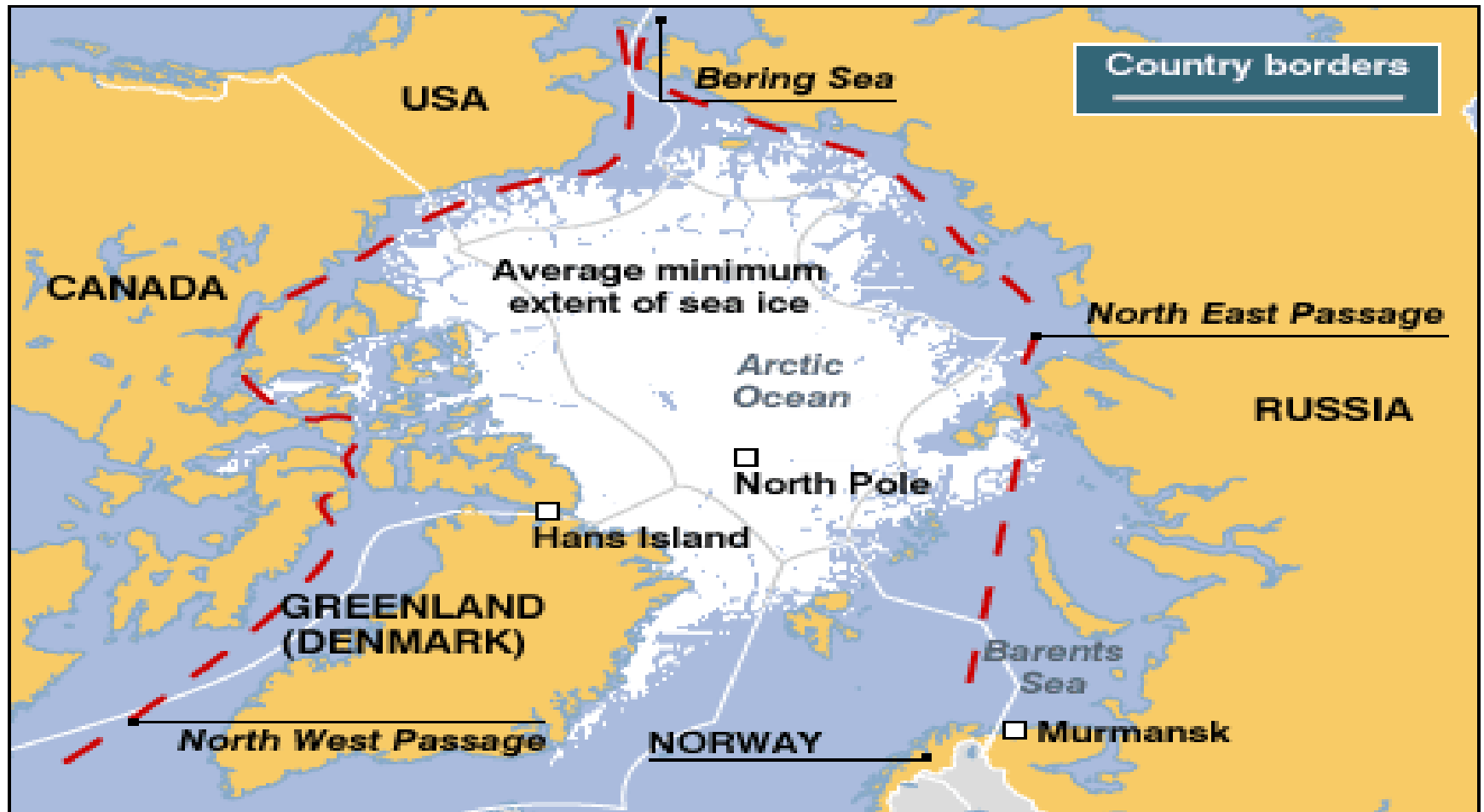
The United States: Slowly entering the race...Domestic Interest Group Politics?



US Government stands on the sidelines

- But The US hasn't even ratified the relevant international treaties that would give it a voice in deciding on competing claims,
- Congress opposes ceding any US sovereignty to international institutions.

Ambiguities: Global Commons?



unresolved issues

- Arctic as Dumping ground for nuclear reactors.
- Arctic region **home to one million indigenous people,**
- Support for groups in **Greenland** petitioning Denmark for political **independence.**

No global governance and new enclosure movement

- Arctic countries will unilaterally grab as much territory as possible and exert sovereign control over opening sea-lanes wherever they can. They are already laying down sonar nets and arming icebreakers to guard their claims.