

Global Security and the Arctic

...Reflections ranging from Geophysical to Geostrategic

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Overview...and a reflection

Over history...the Arctic has been explored, extracted and exploited.

The Arctic has been...a region of collaboration, competition...and contested.

Currently...a region of mostly practical cooperation with a unique set of cooperative mechanisms.

- However...increased competition at state and non-state levels increase the probability of conflict.
- Most Arctic nations are at work... to manage militarization in the region.

Gaining domain awareness and understanding....is critical to for governance, organizations and operators...and reduces undiscovered illicit activities and the risk of miscalculation between states.

Arctic region...has long challenged technology that creates domain awareness and understanding.

While the Arctic is warming...it remains perilous for the average person.



Photo from Wikipedia.Com





Major issues facing the U.S. in the Arctic

Governance...a myriad of multinational entities...perhaps the most of any region
Protecting...marine life, people...in particular, our citizens
Preparing and responding to crisis (HA/DR)...Defense Support to Civil Authorities
Homeland Security...Border, Transportation and Maritime
Homeland Defense...NORAD's Maritime Warning
Projecting Power and Defending in Depth...in support of National Interests with Allies and partners





Defining the Arctic...as it matters from a Security Perspective

Geographically: 66.33 North

Temperature: 10 degree C/50-degree F July Isotherm

Politically (via the Arctic Council):
60.00 North

How the United States defines its own Arctic: Yukon and Kuskokwim River Delta North...extending south and west to the Aleutian Islands and all of the Bering Sea...1984 Arctic Policy Act



Photo: U.S. Arctic Research Commission



Photo: www.geographicguide.net



In the 21st Century...the Arctic is still cold, wild and remote...but changing dramatically



The Arctic Ocean is the smallest and shallowest of the world's oceans
...average depth is approx. 3400 feet

Photo: www.usgs.gov.



Photo: <http://90-north.com/resources/polar-data-maps/>

“The Arctic Ocean: cul de sac of the world ocean[s]”

<http://www.jeanlouisetienne.com/EN/images/encyclo/imprimer/18.htm>



A Warming Arctic...Creating New and Easier Access

Arctic has been warmer and colder than today.
Arctic has been steadily warming since the last ice age...with some deviations.
Arctic Warming has recently accelerated.
Some Points of Reference:

- Captain James Cook: Encountered a “20 foot wall” of sea-ice in Northern Bering Sea
- Arctic Sea Ice---median thickness: 8 foot thick pan-Arctic 1966
- Today---median thickness is less than 4 foot thick
- Sea-ice north of Greenland remains the most persistent

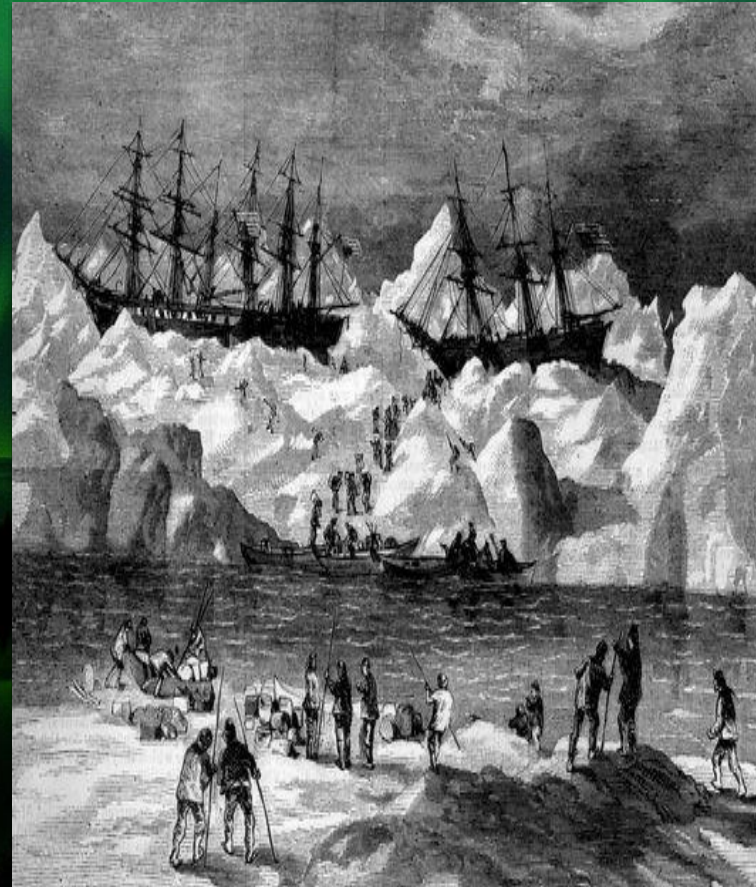


Photo: <http://www.usatoday.com/story/news/nation-now/2016/01/08/144-year-old-arctic-shipwreck-found-off-alaskan-coast/78496784>

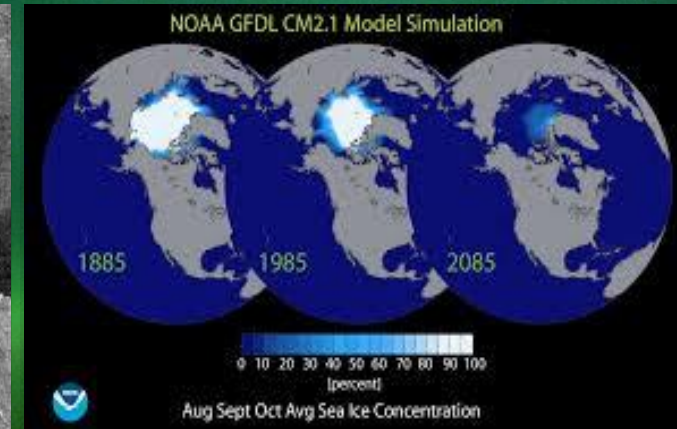
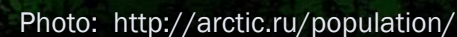


Photo: <https://www.gfdl.noaa.gov/the-shrinking-arctic-ice-cap-ar4/>



- St Petersburg, Helsinki, Stockholm, Oslo, Reykjavik, Whitehorse, Fairbanks and Anchorage





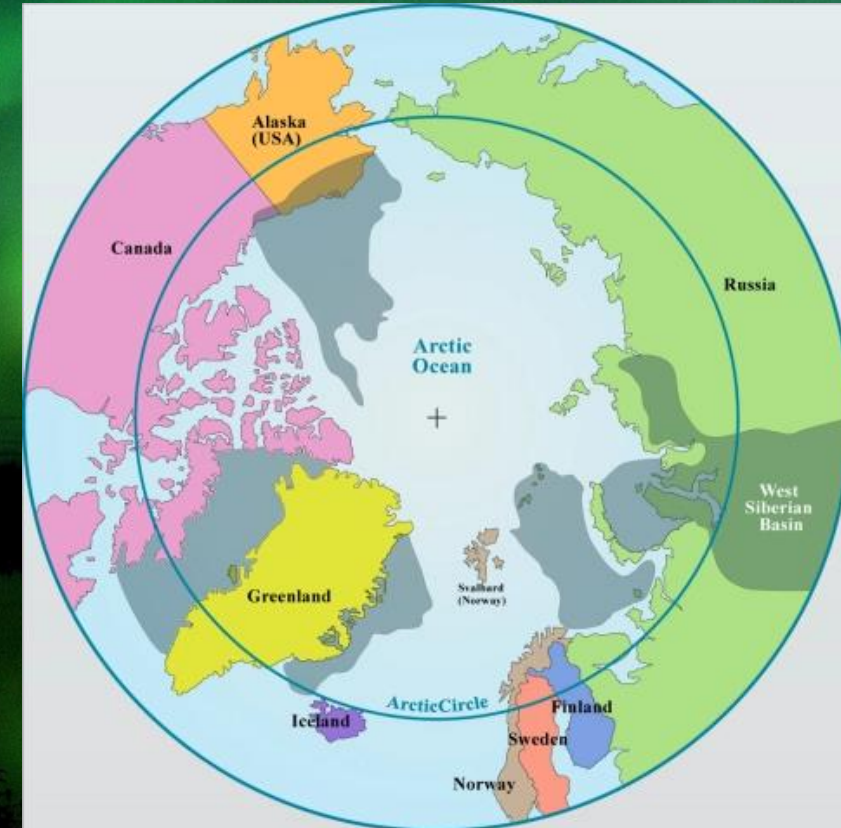
“Arctic Nations”

Countries with Sovereign Territory above 66.33 North the Arctic Nations (The Arctic 8)

- Russian Federation
- Canada
- Norway
- Denmark
- United States
- Iceland
- Sweden
- Finland

Countries with direct access to the Arctic Ocean:

- Russian Federation
- Canada
- Norway
- Denmark
- United States



Graphic courtesy of Worldpress.com



Countries who have Articulated or demonstrated National Interests in the Arctic

Russian Federation
Canada
Republic of Korea
China
Indonesia
Iceland
India
Japan
Norway
Denmark
Sweden
Finland
Germany
Netherlands
France
United Kingdom
United States



Photo: canadiangeographic.com



[Some] Drivers of change in Geopolitics (and this applies to the Arctic)

Opportunity to gain resources/advance economic wealth

Fear or concern of aggression by another nation/group of nations

Desire to address/**correct** a previous “wrong”

Weakness of one/group of nations in comparison (whether it is due to national will, changing focus, etc.)

New dynamics as a result of **physical changes** to the geography/climate

Policy changes (whether unilateral or multilateral) that compel relationship, boundary changes, etc.



Photo: YouTube.Com



Photo: Svalbard, see www.thousandwonders.net



Photo: YouTube.Com



A sketch of Arctic Nations' postures in macro-terms...



Russian Federation: Economically vulnerable, struggling to exercise governance over its vast territories, driven by a cultural fear of invasion/threats from outside its borders and government fears of internal unrest. A melting Arctic poses an exposed boundary that must be defended, and the NSR is a potentially significant "toll road"



Finland: Militarily vulnerable (and this is a historic concern), worried about Russian Federation, not NATO, but committed to European Union. Economically stagnant, seeking regional stability.



Sweden: Similar to Finland militarily, stronger economy, rising internal polarization stemming from immigration (incorporated significant numbers of refugees, now nearly 10% of the overall population)



Norway: Strong NATO, strong economy, stronger internal stability, direct boundary with Russia, and shared terrain (Svalbard) with Russia.



Denmark: Strong NATO, good economy, and struggling with how to best cope with Greenland who seeks independence...but does not have the means to support themselves. Concerned with PRC intentions.



Iceland: Open for business, even PRC. Committed to NATO, sees rising tension as opportunity to regain fiscal benefit of NATO investment.



Canada: A stabilizing factor for North American Arctic. Constrained by economic investment that thwarts aspirations for "more in the Arctic." Unclear future in terms of federal control over domains now administered by Indigenous governance.



U.S. A long conversation...





Drivers of change...across the Arctic

Russia
NATO & EU
PRC
U.S. & Allied/Partners in Europe
Arctic Council
Non-Arctic Nations
Industry and interest groups
United Nations
Indigenous voices...and the desire for self determination
Potential of a “rising Arctic civilization”?
The Arctic itself...



Photo: Globalrisks.com

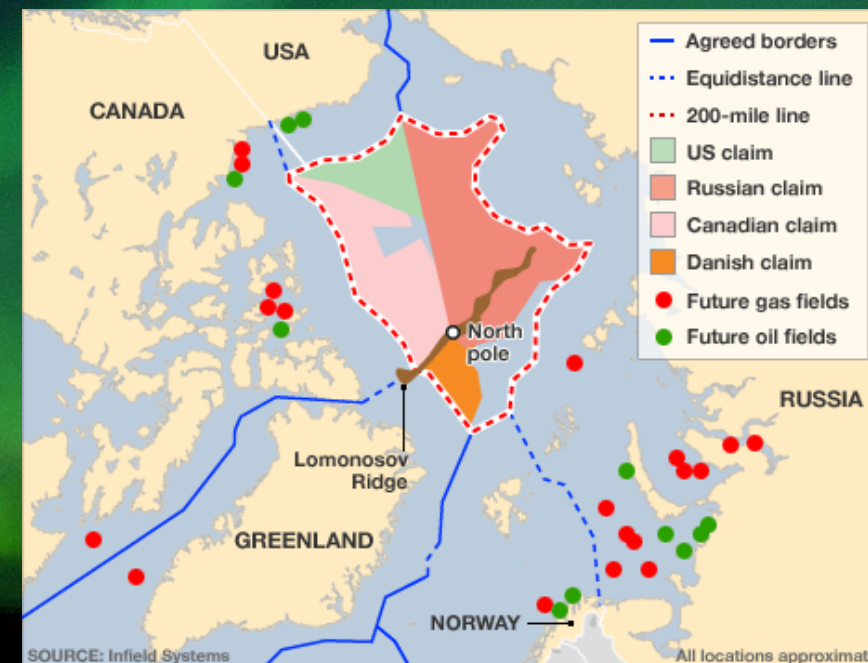


Photo: Snowbrains.com



Photo: Encyclopedia Britannica



Photo: Arctic Culture Center, Hammerfest NO

The Ted Stevens Center for Arctic Security Studies...meeting the challenge through networks and solutions



U.S. National Interests in the Arctic ...are intrinsically tied to Economic Security

Without economic means...National Security investments in the Arctic are fragile and generally not sustainable

Nations have viewed the Arctic for centuries from an “economic opportunity” lens.

Leveraging the Arctic in terms of access, transportation advantage, and natural resources ...has improved economic security of nations (and correspondingly their overall security).



Photo: Public Domain



Arctic Council...Capstone International Arctic Policy Body



A high-level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic Indigenous communities and other Arctic inhabitants



Photo: <http://www.rcinet.ca/eye-on-the-arctic/wp-content/uploads/sites/30/2016/09/arctic-council-20-view-from-iceland.png>

The Arctic Council is made up of eight Member States, six indigenous Permanent Participant organizations, six Working Groups, three Task Forces, one Expert Group, and 32 observers...



Photo: www.ktoo.org

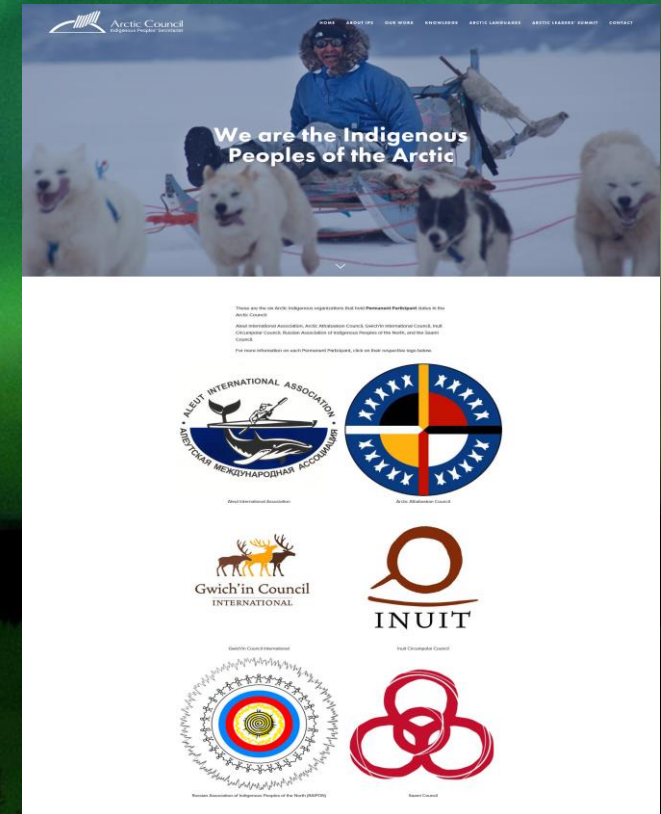
Note: Arctic Council does not address Security or Defense Issues

The Ted Stevens Center for Arctic Security Studies...meeting the challenge through networks and solutions



Arctic Nation-like entities = People Groups who are recognized with sovereign claims within the Arctic region

- Six Arctic Indigenous organizations that hold Permanent Participant status in the Arctic Council who are provided a level of “sovereignty” (international recognition as a “national-like” entity), at the Arctic Council.
- Terminology does not yet have the full effect of national/international law, but these organizations are afforded equal status as nations at the Arctic Council
- Organized as the **Arctic Council Indigenous People Secretariat**.
- These are: **Aleut International Association, Arctic Athabaskan Council, Gwich'in International Council, Inuit Circumpolar Council, Russian Association of Indigenous Peoples of the North, and the Saami Council.**



Graphic courtesy of Arctic Council Indigenous Peoples Group Secretariat



International Collaborations among Arctic Nations and Arctic Nation-like entities

While the Arctic remains one of the least populated regions on the planet, the Arctic has one of the highest numbers of international collaborations to be found on the globe. Over the past 40 years, the rise of the number of organizations that seek to advance various professional disciplines of the Arctic continues to rise and as a result, has created an array of mechanisms collectively advance protection, preservation, prosperity and security of this yet, remote and wild region.

In broad categories these include:

- Governance & Policy
- Safety, Security & Defense
- Academics and academically led research
- Environmental protection
- Indigenous rights and cultural heritage advancement
- Economic & industry



Graphic courtesy of the University of the Arctic



International Collaborations among Arctic Nations and Arctic Nation-like entities...Safety, Security & Defense

Safety

Arctic Council (International Search and Rescue Agreement)
IMO (Supporting the IMO Polar Code)
Arctic Coast Guard Forum (AGF)



ACGF



Security

Arctic Coast Guard Forum
Arctic Security Forces Roundtable

Defense

- Canada-U.S. Permanent Joint Board of Defense (A Presidential-Prime Minister Appointed Governance body for CANUS defense)
- North American Aerospace Defense Command (NORAD)
- North Atlantic Treaty Organization
- Arctic Security Forces Roundtable and Northern Flanks Dialogue
- Nordic Defense Cooperation (NORDEFECO)



Ogdensburg Conference (1940)

-Declaration made by Canadian Prime Minister Mackenzie King and U.S. President Roosevelt on August 18, 1940
-Agreed to set up Permanent Joint Board of Defense to protect the two countries
-Created closer "continental defense cooperation" between Canada and U.S. during WWII





International Collaborations among Arctic Nations and Arctic Nation-like entities...Economic and Industry



...Well, Sort of: Arctic Circle Assembly
The largest annual international gathering on the Arctic
“Business included” Reykjavik Iceland

Collaboration for industry is generally via international conferences and symposia on an annual basis



Conducted by Lapland
Chamber of Commerce
Finland



Hosted in Tromso
Norway



Arctic Economic Council

AEC's work is driven by Working Groups which are action-oriented and focus on solutions that drive Arctic business forward in a responsible and sustainable manner



State of Alaska factors: Tribal Governance

*Another form of local government in Alaska is *tribal government*, which exists in various forms throughout rural areas of the state. The *tribal governments derive their authority from laws and legal precedents that go back to the earliest days of the United States.*

- The underlying notion was that Natives had governed themselves before the United States came into existence and that they retained unique rights of self-government after the nation was established.
- The *U.S. federal government recognizes 229 tribes in Alaska.*



Tribal governments are generally community/locally-based and operate in parallel to local elected leaders that exist under a village or town jurisdiction/incorporation

Issue: Tribal Jurisdiction is not captured in State Constitution “State to Tribal” (government to government) negotiations does not have legal framework, making negotiations problematic

*<http://www.akhistorycourse.org/governing-alaska/tribal-governments/>



U.S. Arctic and Alaska Native Claims Settlement Act. Positive Impact to U.S. Security in the Arctic

ANSCA: Established the rise of Alaska's Native Corporations

- Multi-billion dollar industry across the State of Alaska
- Powerful Political Force



Photo: timetoast.com



Alaska Native Claims Settlement Act:
pre-1971 to present

Photo: openansca.community.uaf.edu



Photo: snipview.com





Alaskan Native Arctic Populations...under increasing stress

Factors:

- Less opportunity in the villages
- Greater outside influences
- Corrosive influences...drugs, alcohol
- Increasing costs of goods and services
- Diminished ice environment...complicating traditional hunting

Impacts:

- Traditional ways of life appeal to fewer
- Diminishing populations...may not be sustainable in some villages/areas



© Associated Press Photo

Photo: www.dailymail.uk.com



Photo: www.natgeo.creative.com



The U.S. and other nations stated goal...a
“Peaceful Opening of the Arctic”

Economic security catalyst...easier access
abundant natural resources

Hydrocarbons

Gold

Iron

Copper

Bauxite

Nickel

Diamonds

*What happened when something goes
wrong?*



Photo: <https://www.pacificenvironment.org/in-the-news/meps-urge-oil-drill-ban-arctic/>



Photo: Diavik Diamond Mine Canada
www.mining.com

The Ted Stevens Center for Arctic Security Studies...meeting the challenge through networks and solutions



The Arctic basin: Rich in hydrocarbon deposits

Potentially significant demand for Arctic Hydrocarbon extraction

On/near shore much less costly to produce

Approx Price point:

- \$100/barrel for new on/near shore
- \$125+ for off-shore

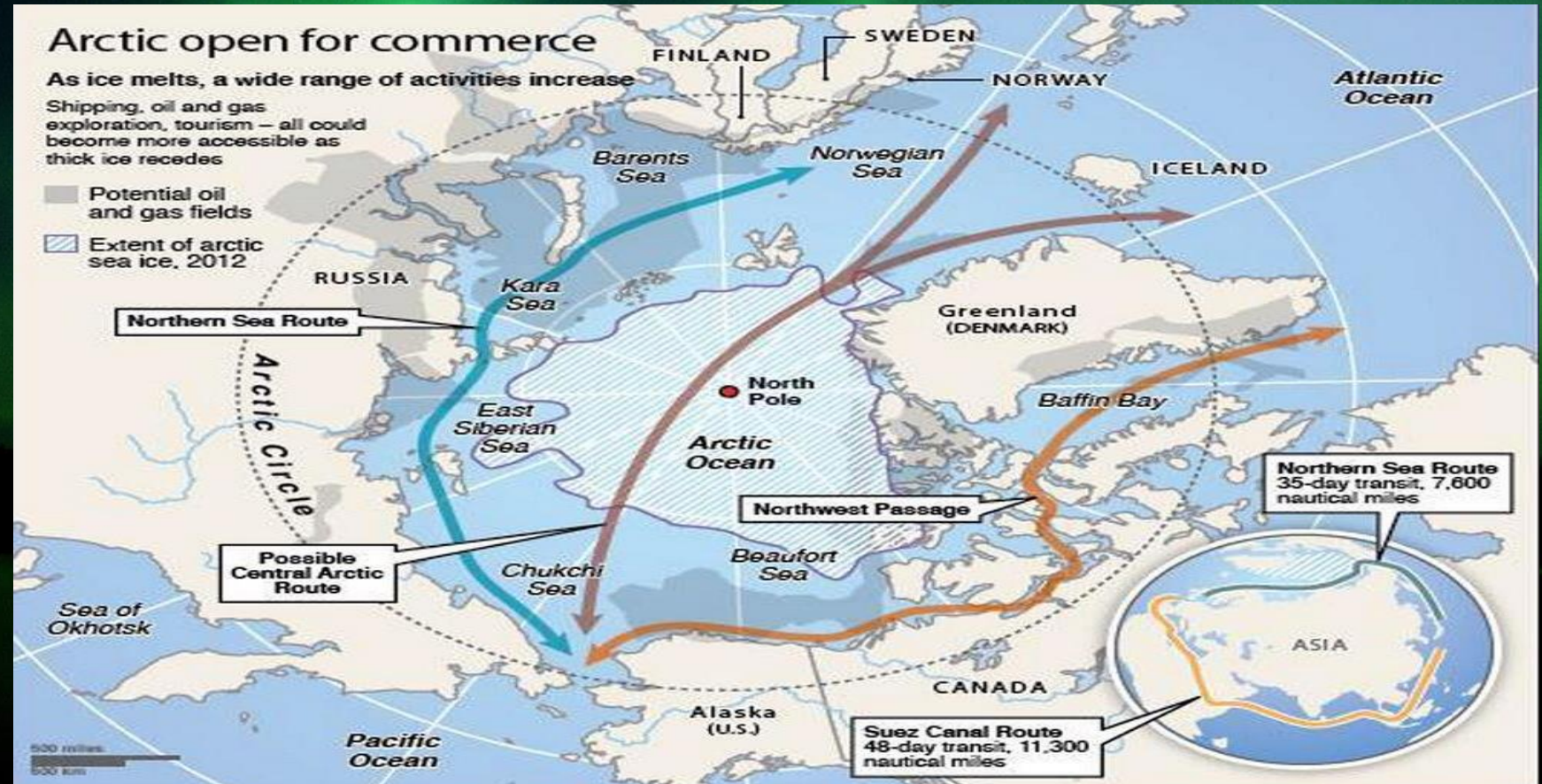


Photo: <http://static1.businessinsider.com/image/53750c126bb3f72e37360e2c-1023-849/bnoa7zsiaatxgb.jpg>



Arctic Maritime Traffic: Destination Tourism, Throughput Shipping and Fishing



Photo: <http://cruiseweb.com/cruise-lines/crystal-cruises/ship-crystal-serenity>



Photo: [Response.restoration.noaa.gov](http://response.restoration.noaa.gov)



Photo: <http://cdn1.img.sputniknews.com/images/102642/46/1026424622.jpg>

- Maritime and other current issues facing the U.S. in the Arctic region



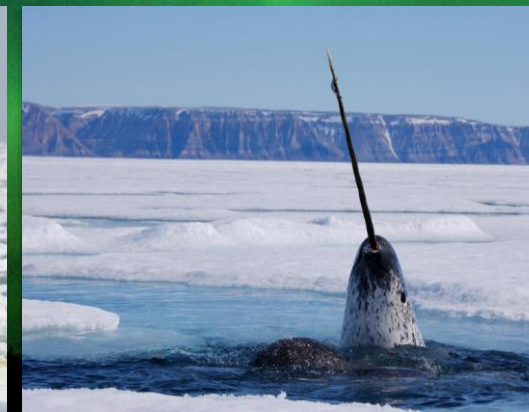
Wildlife...factors in localized Arctic economic security

Subsistence lifestyle dependency on land and marine mammals, massive seasonal bird populations (along Arctic plains)

National interests in accessing increasing fish stocks



Photo: Fisherynation.com



Photos: www.worldwildlife.org





Leveraging Opportunity?...Maritime Traffic Across the Arctic

- Great Circle = Advantages for travel
 - Opportunities for a 4K mile shortcut?
 - Economic viability depends on Arctic (physical) Trajectory
 - Insurance and on-time deliveries...

...may dampen near term enthusiasm

...long term...a different story



Photo: <http://container-news.com/tuscor-lloyds-arctic-shipping-boom-met-frosty-response/>

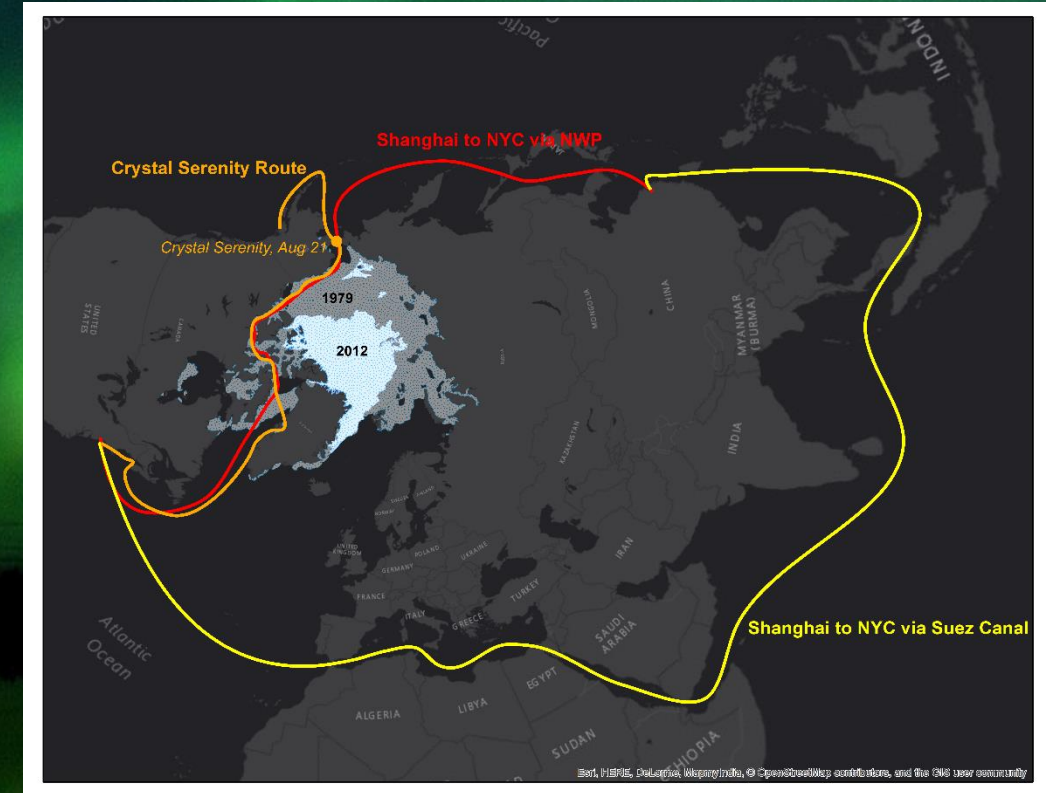


Photo: theicctt.org



National and Regional Arctic Security ...from a Law Enforcement Vantage

Illegal and Unregulated Fishing and
Marine Mammal harvests

Illicit and criminal activities that
exploit lower security measures

Insufficient ability to monitor and
resources (including people) to
intercept criminal activity

Insecure coastlines, borders and
ports

From a U.S. Vantage
The Arctic is
“America’s unlocked,
unguarded, open back
door”



Photo: Polar Foundation.org



Photo: Ground report.com



Security in the Arctic vs Defense...What's the Difference and What is New?

- Thesis: Security (National and Collective) must accompany Increased Human Activity
- Defense is a Matter of Collective and/or Individual Trust (or Mistrust)
- Defense and militarization = inevitable?
- One nation seems pretty serious about building bases above 66 degrees
- What about the rest of us?



<http://www.thearcticinstitute.org/why-military-security-should-be-kept-out-of-the-arctic-council/>



Thule AB Greenland
Photo Wikipedia.com



<https://news.usni.org/2016/10/17/panel-russian-militarization-arctic-raising-security-concerns>



Ice Breakers enable Arctic maritime security, and the U.S. is behind



Photo: Oceanandairtechnology.worldpress.com



Photo: Politico.com

Arctic icebreaker gap...

Russia: 40

Canada: 6

U.S.: 1.5

China: 2- 3

U.S. NDAA:

- 3 Heavy
- 3 Medium

...2 new appropriations!

Key point: In a diminished ice environment...Icebreaking is even more necessary, as increased shipping will seek to access previously unattainable maritime regions. Plus...Icebreaking can extend shipping shoulder seasons



Arctic Maritime Activities...UNCLOS and IMO Polar Code

UNCLOS: In a word: "Just do it"...U.S. is decades overdue in ratifying the treaty

IMO Polar Code...giant step forward for protecting the Arctic environment and Arctic shipping

UNCLOS and IMO Polar Code...improves safety and security in the Arctic



POLAR CODE SHIPPING IN POLAR WATERS

Photo: www.enavnorthamerica.org



www.dfo.mpo.gc.ca



Photo: www.imo.org

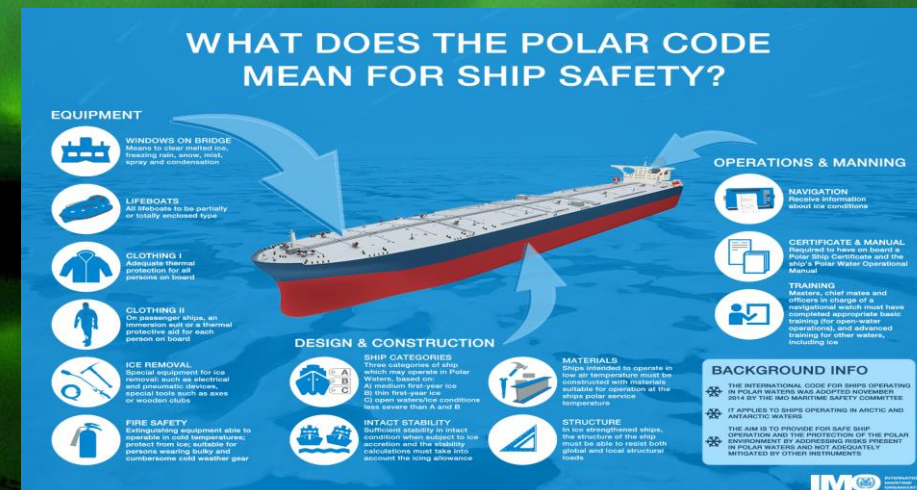


Photo: www.worldmaritimeneews.com



Arctic Maritime Changes: In sum, Increasingly Severe Weather...complicating security measures (and associated operations)

Factors:

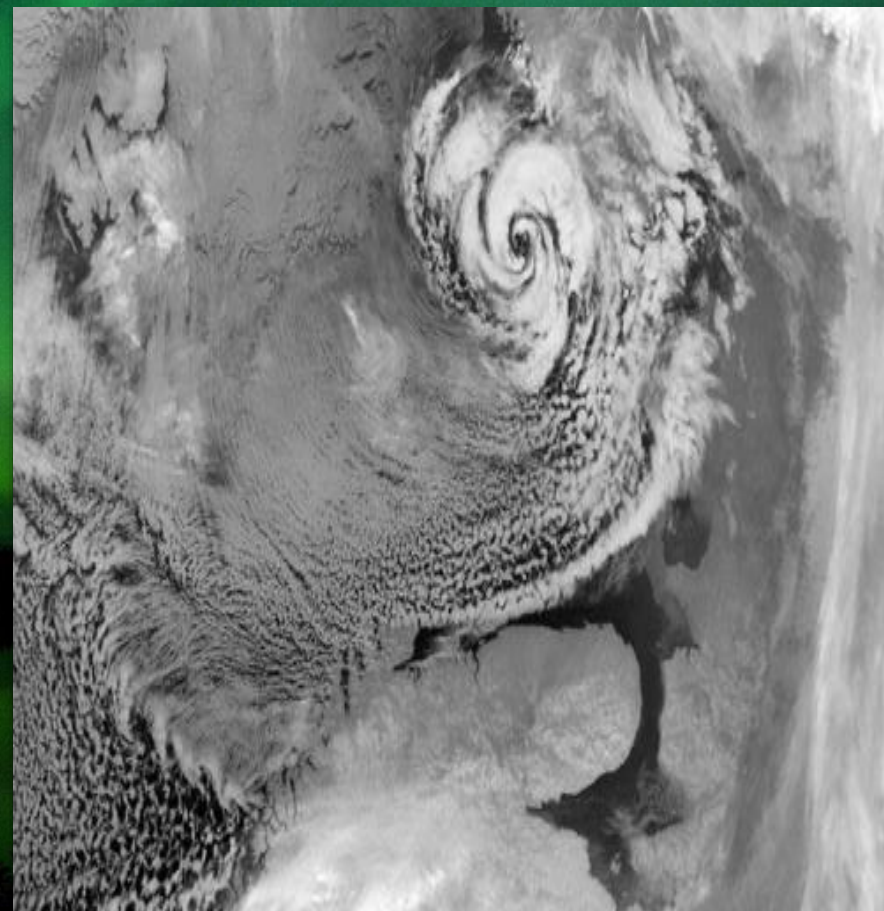
- Increasing surface warmth and decreasing ice
- Increasing water temperature
- Increasing acidification
- Current changes?
- Increased winds
- Increased waves
- Broken ice battering
- Autumn Bering Beaufort and Chukchi “a hurricane every week”

Impacts:

- Increased hazards to surface operators
- Increased risk to the food web
- Increased risk to marine mammals and indigenous hunters



BEN BIRCHALL / THE ASSOCIATED PRESS



A polar low northeast of Scandinavia in the Barents Sea.
Credit: Erik Kolstad/flickr.



Arctic Coastal Changes: Is Resilience Enough?

Factors:

- Increasing surface warmth and water temperature
- Decreasing ice
- Decreasing and delayed onset of shore fast ice
- Thawing of coastal shorelines frozen for centuries

Impacts:

- Increased coastal wave pounding
- Increasing storm surge flooding and erosion
- Increasing infrastructure losses to coastal communities



<https://nsidc.org/cryosphere/icelights/2011/05/sea-ice-and-arctic-coast>



Photo: www.Polarfieldservice.worldpress.com

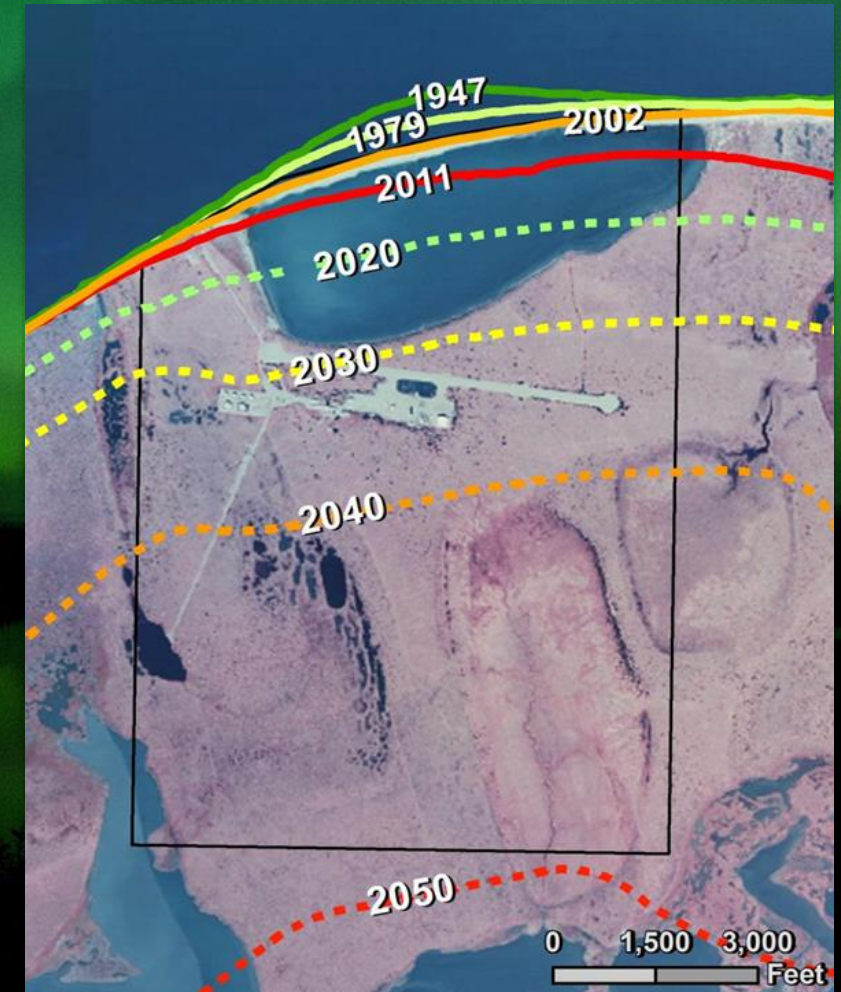
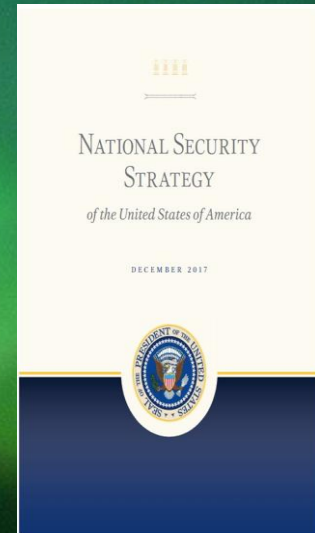
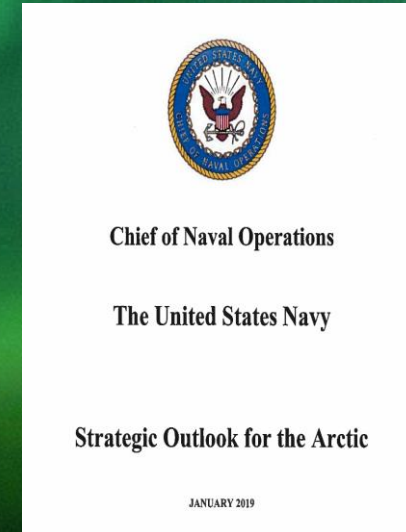
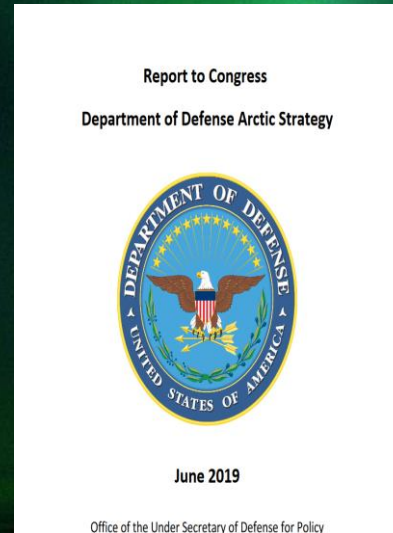
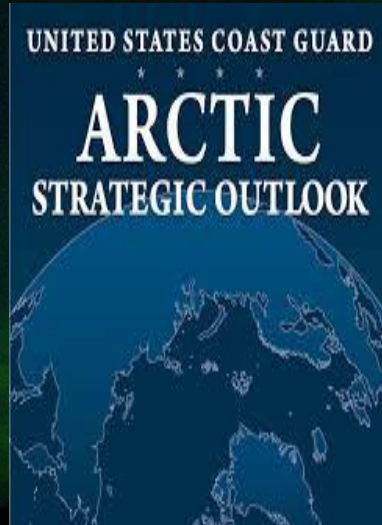
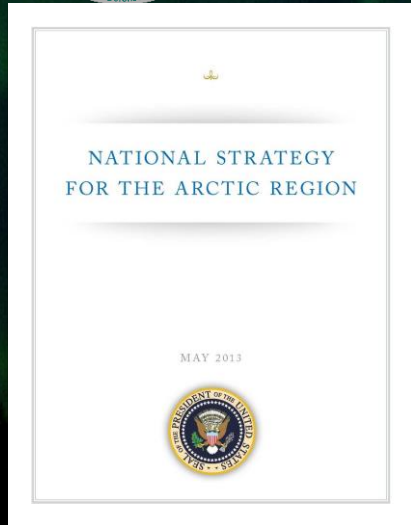


Image courtesy of BEM Systems

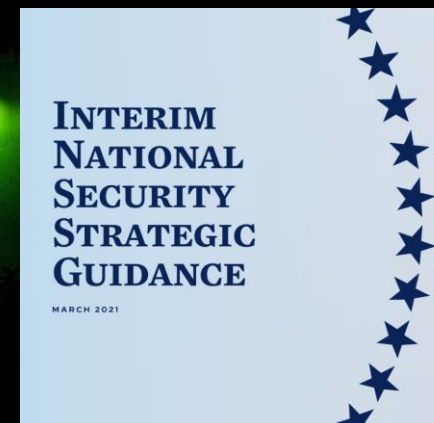


More than any other region...Department and Agency Arctic Strategies...Guiding U.S. Federal Arctic activities



Arctic Strategies and Roadmaps reflect U.S. Department and Agencies commitment to advancing efforts in the U.S. Arctic

Not all Strategies are “Ends, Ways and Means.”



The Ted Stevens Center for Arctic Security Studies...meeting the challenge through networks and solutions



Connecting Security and Defense across the Arctic...

- “Nations with Sovereign Territory above 66.33 North = Arctic Nations
- Arctic Nation-like entities = People Groups who are recognized with sovereign claims within the Arctic region
- International Collaborations among Arctic Nations and Arctic Nation-like entities
- Arctic-focused international organizations
- International entities with Arctic responsibilities or mandates
- U.S. Federal Agencies with Arctic responsibilities as defined by statute and/or policy
- State of Alaska Organizations with Arctic responsibilities
- Local governance within the Alaskan Arctic
- Industry within Alaska that is conducted within the Arctic
- Note: While striving for completeness...this is still a representative sample

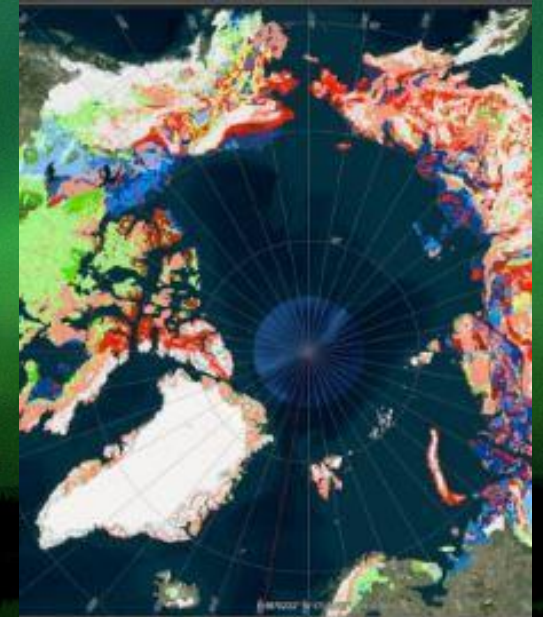


Photo: Public Domain from USGS.Gov



As a result of the catalysts...the Arctic is increasingly vulnerable

- **Diminishing Ice Environment** is an incentive for increased human activity.
- **Day to day:** Increased tourism, resource extraction and shipping...happening now...and projected to accelerate.
- **Changing Arctic ecosystem** impacts physical environment and the human terrain.
- **Indigenous subsistence lifestyles** are threatened and may become unsustainable over the coming decades...ways and means to help our collective Arctic residents is needed.
- **Despite policies and positions** of rational Arctic nations, the Arctic is at increasing risk of becoming a zone of competition...at non-state and state levels.
- **Logistics costs and constrained national budgets** equate to an Arctic capabilities less robust NATO Allies and partners would likely prefer.



Question: the people in the picture... **friendly or hostile?**

- Phase 0?
- Illicit activity?
- How do we know?



Domain Awareness in the Arctic...people factor?

- **In sum:** rising activities from great powers and other nations from within and without the Arctic coinciding with increasing illicit activities...associated with a diminishing ice environment.
- **Great Powers:** Russia has always taken the Arctic seriously. China sees advantage and now takes the Arctic seriously. The U.S. and our Allies & Partners have much to lose...but we may not understand the threat and the risk.
- **Criminal Actors:** On the ground security personnel in remote/austere locations in the Arctic relay increasing amount of criminal activities.
- **Environmental security:** Physical changes of the Arctic environment impact ability to secure respective national interests, but agencies vested with research and establishing understanding are not well integrated to traditional security.
- **Presence less than need:** The Arctic maritime approaches have a [too] modest presence to safely patrol and protect waterways with increasing maritime traffic.





Understanding Threat and Risk...conflict driver, scope and consequences?

Probability of crisis conflict within the Arctic...based on:

- Due to miscalculation?
- Due to quest for resources?
- Due to forcibly correcting another state's environmental-related decision?
- Due to desire to establish regional hegemony?
- Due to a long disputed territorial matter?
- Due to conflict transferring from lower latitudes?
- Other?

• Scope of any potential conflict?

- Influence ops/posture/power projection?
- Proxy conflict?
- Hybrid warfare?
- Maritime/aerial/space-based conflict?
- Land forces/territorial invasion/occupation?
- Conventional vs nuclear exchanges?
- Other?

Consequence?

- What would be considered the “terms” of an acceptable contest?
- Limited aims and escalation management?
- Other?





Now in context?

Creating opportunity...to learn from each other, to better understand the multiple dimensions of...

- Growing partnerships and advancing networks of the communities of people who are trying to advance a more secure and helpful Arctic.
- Advancing Arctic MDA?
- Improving Arctic Observation Systems...a multi-dimension, multi-agency and multi-national opportunity...
- Understanding the current legal environment...in order to better understand the various claims across the Arctic basin?
- Developing Arctic spatial discernment...in order to support operator decision precision?
- Creating a more perfect set of strategies, plans and policies...informed by advances in Research, Studies, Analysis, Education and Engagement?





Into the Future...

Take aways...

- Complex array of human activity
- Peaceful opening continues
- Impact of changing climate and weather
- Diminished ice and a new ocean...create opportunity and challenges.
- Nations that invest...will outpace those who don't
- Coordination mechanisms do not substitute for real investment and hard capabilities.
 - (Never have...and Never Will).



Photos via TSC Sr Advisor for Arctic Security Affairs

More to Follow...
Ready for
Questions

