

# US Arctic Research Commission report to AIACC

John Farrell

11/19/15





## USARC's duties:

- Develop national Arctic research policy
- Facilitate Arctic research cooperation (w/IARPC)
- Review federal Arctic research programs
- Recommend improvements for data sharing
- Facilitate cooperation w/Alaska & internationally

## USARC COMMISSIONERS



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Anchorage, AK



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City University of New York  
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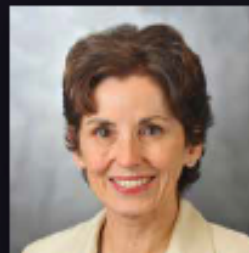
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Ex Officio  
Director, National Science Foundation  
Arlington, VA

UNITED STATES ARCTIC RESEARCH COMMISSION



REPORT ON THE **Goals and Objectives** for  
**Arctic Research 2015–2016**

FOR THE US ARCTIC RESEARCH PROGRAM PLAN

# Federal Arctic research policy/process



USARC set goals



IARPC adopts, creates & executes research plan



White House: OMB/OSTP coordinate & review budget



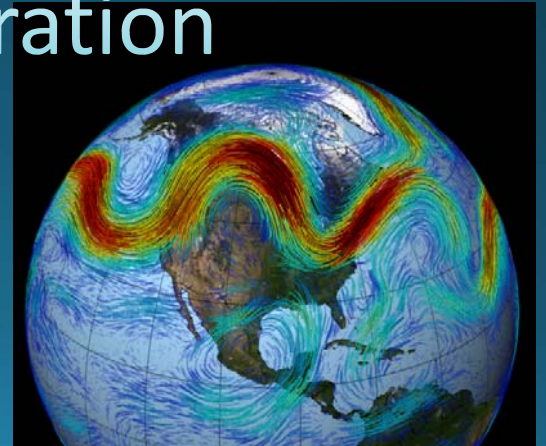
“The Commission shall, after submission of the President's annual budget request, review the request and report to Congress on adherence to the Plan.”



Congress: Authorizes & Appropriates

# 6 priority goals for Arctic research

1. Environmental Change
2. Human Health
3. Natural Resources (renewable energy)
4. The “Built Environment”
5. Cultures and Community Resilience
6. International Scientific Cooperation



# “Built environment”: Port of Nome



Photo Courtesy of Marine Exchange of Alaska

# Oil Spill Research

## Oranges Are Not Oil

In support of the recommendation from the National Academy of Sciences,<sup>43</sup> USARC recommends that the Interagency Coordinating Committee on Oil Pollution Research, in cooperation with other federal entities, develop guidelines to enable researchers to plan and conduct deliberate releases of crude oil in US waters.



Oranges thrown in ice-infested Arctic waters to simulate an oil spill. *Photo credit: USCG*



# 6th Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations



July 14-16, 2015  
Naval Heritage Center at the U.S. Navy Memorial  
Washington, DC

Co-hosted by the U.S. National Ice Center and the U.S. Arctic Research Commission

Please mark your calendars for the **6th Symposium on the Impacts of an Ice-Diminishing Arctic on Naval and Maritime Operations**, co-hosted by the U.S. National Ice Center (NIC) and the U.S. Arctic Research Commission (USARC), July 14-16, 2015 at the Naval Heritage Center, 701 Pennsylvania Ave., NW, Washington, DC.

## Background:

- ▶ Co-hosted by U.S. National/Naval Ice Center (NIC) and the U.S. Arctic Research Commission (USARC).
- ▶ A biennial symposium originating in 2001 that focuses on U. S. naval operations and national strategic issues in an "ice-free Arctic"
- ▶ Symposia in 2007, 2009, 2011 and 2013 expanded the discussion to include other nations and the impacts on their maritime operations in an "ice-diminishing Arctic" such as commercial transportation, oil and gas exploration and exploitation, fisheries, and oceanographic research. The continuing reduction in Arctic sea ice extent remains a central focus.

## Discussion:

- ▶ This symposium brings together nationally and internationally recognized experts on Arctic observations, climate change, and maritime operations.
- ▶ High-level opening remarks are anticipated from NOAA, Navy, USCG, USARC, Canadian Coast Guard, and other U.S. and international government representatives; special invitations to be sent to the Alaska Congressional Delegation and from representatives from other Arctic nations.
- ▶ The 2015 symposium program will be influenced by relevant Arctic-related events since the 2013 symposium, including:
  - ▶ 2015's peak winter Arctic sea ice extent

## 2015 Symposium Information

- [Symposium Home](#)
- [Program and Agenda](#)
- [Posters](#)
- [Visualizations](#)
- [Directions and Travel Info](#)
- [Symposium Links and Resources](#)
- [Pablo Clemente-Colón](#), or call (571)431-2331

## Symposium Hosts

- [The U.S. National Ice Center \(NIC\)](#)
- [The U.S. Arctic Research Commission \(USARC\)](#)

**Additional information:**  
[Dr. Pablo Clemente-Colón](#)

Chief Scientist, National Ice Center  
(571)431-2331

# ARCTIC UPDATE

THE US ARCTIC RESEARCH COMMISSION DAILY EMAIL NEWSLETTER



February 15, 2013

## Today's Events

The House is expected to complete consideration federal pay legislation and consider a resolution condemning North Korea for testing a nuclear device. The Senate is not in session.

## Media



**Murkowski Urges Secretary of State Kerry to Maintain American Leadership, Momentum in Arctic.** Senator Lisa Murkowski reached out to new Secretary of State John Kerry, asking him to prioritize America's Arctic engagement as his predecessor did, with Murkowski becoming the [first U.S. Senator to participate](#) in the Arctic Parliamentarians' conference in 2011 with former Secretary of State Clinton - making a high-profile national commitment to Arctic issues. In a letter to the Department of State, Senator Murkowski call upon expanded U.S. leadership in a region currently at a crossroads - with Arctic waters opening and international policies being created. [Alaska Business Monthly](#)

**Aberdeen Scientists Trawl Arctic Seabed for Antibiotics as World Faces 'Apocalypse.'** The desperate search for new life-saving [antibiotics](#) has reached new lows, as scientists dredge the Arctic and Antarctic seabed to try to find new medications. Dame Sally Davies, England's [chief medical](#) officer, recently warned that the world is facing an "apocalyptic scenario" as we are fast running out of antibiotics. The over-use and reliance on antibiotics has meant that many diseases are now resistant to them. [International Business Times](#)

### Arctic Ice Loss Causing Big Changes.

Last year's record loss of Arctic sea ice is already causing big changes for plants and animals that scientists are just starting to understand, according to newly published research. "It takes only one season to change how a deepsea system functions," said Antje Boetius, who was the head scientist aboard a German research vessel that sailed through the High Arctic last summer. That voyage of the Polar-stern, owned by



USARC's daily  
"Arctic Update"  
newsletter

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## USARC...in summary

- Independent agency, small but nimble
- Empowered to advise POTUS & Congress
- “Honest broker”
- Commissioners...Arctic advocates
- Create opportunities for collaboration
- Find and nurture champions
- Communicate and engage broadly

# Executive Order: Enhancing Coordination of National efforts in the Arctic

January 21, 2015

The White House

Office of the Press Secretary



For Immediate Release

January 21, 2015

## **Executive Order --- Enhancing Coordination of National Efforts in the Arctic**

EXECUTIVE ORDER

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### ENHANCING COORDINATION OF NATIONAL EFFORTS IN THE ARCTIC

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to prepare the Nation for a changing Arctic and enhance coordination of national efforts in the Arctic, it is hereby ordered as follows:

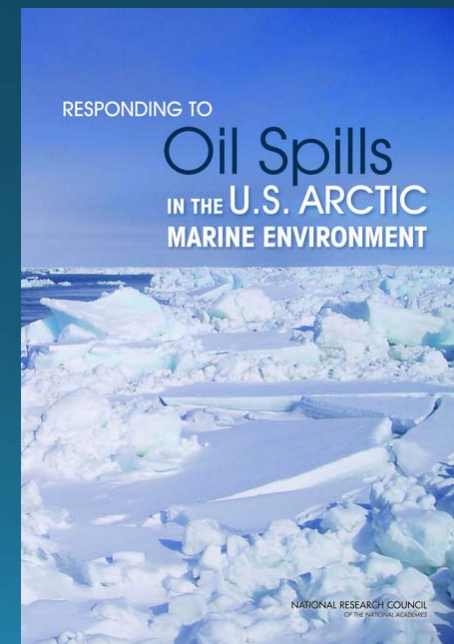
Section 1. Policy. The Arctic has critical long-term strategic, ecological, cultural, and economic value, and it is imperative that we continue to protect our national interests in the region, which include: national defense; sovereign rights and responsibilities; maritime safety; energy and economic benefits; environmental stewardship; promotion of science and research; and preservation of the rights, freedoms, and uses of the sea as reflected in international law.

# Arctic policy & coordination chronology

- Arctic Research & Policy Act (1984, amended 1990)
  - created U.S. Arctic Research Commission and Interagency Arctic Research Policy Commission
- (8-nation) Arctic Council (1996)
- NSPD-66 / HSPD-25: Arctic Region Policy (Jan 2009)
- National Ocean Council (July 2010)
- Arctic Search & Rescue Agreement (Jan 2013)
- Interagency Report on Arctic Management (Mar 2013)
- Nat'l Strategy for the Arctic Region (May 2013)
- Nat'l Strategy Implementation Plan (Jan 2014)
- Nat'l Strategy Implementation Report (Jan 2015)
- EO on Enhancing Coordination of National Efforts in the Arctic (Jan 2015)

# What can AESC accomplish?

- Help shape & reconcile priorities
- Promote coordinated implementation & evaluation
- Improve coherence of engagement with the State of Alaska and Alaska Native communities
- Support U.S. Chairmanship of the Arctic Council



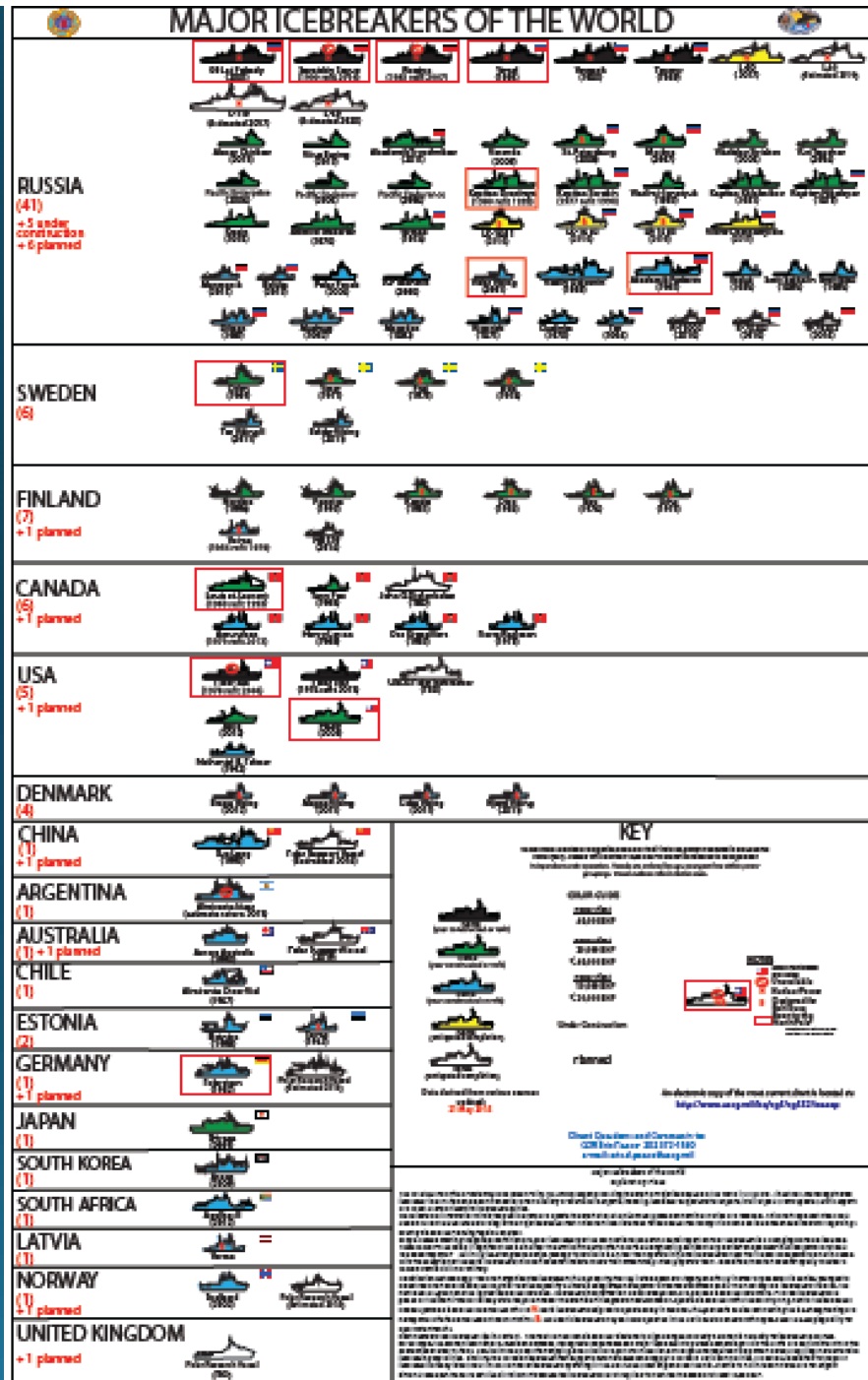
# US Commitments (GLACIER)

- Icebreakers
- Safe Marine Operations & Transportation
- Scientific Monitoring & Observing
- Advancing Climate Resilience
- Clean Energy Solutions
- New Climate Data & Tools
- Enhancing Collaboration



# Thank you CDR Peace

## & Office of Waterways and Ocean Policy



Developed and maintained by USCG Office of Waterways and Ocean Policy (CG-WWM)

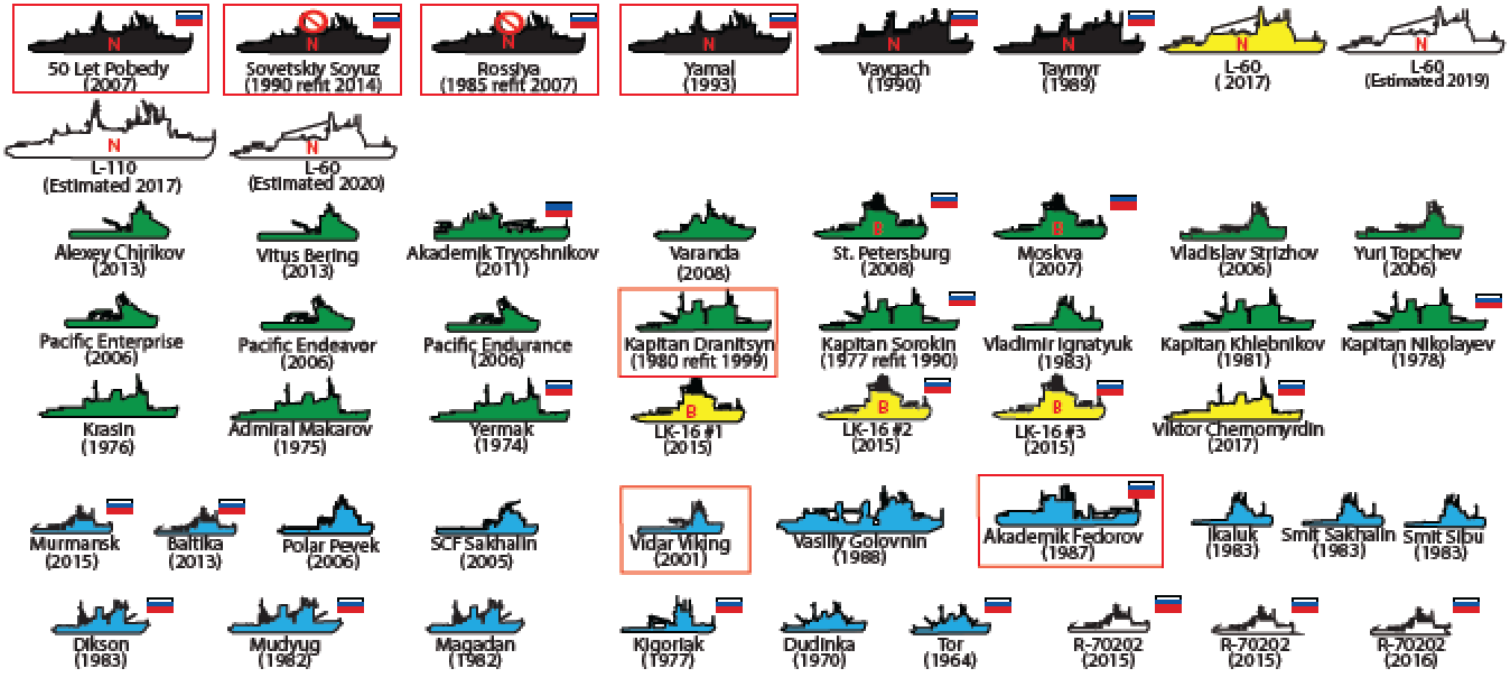




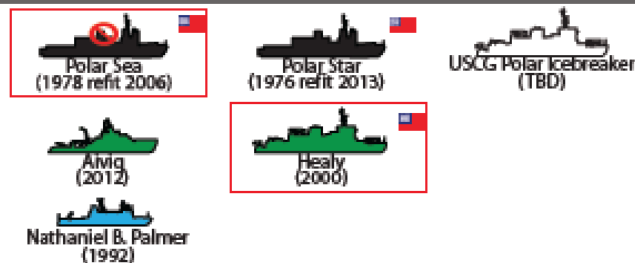
# MAJOR ICEBREAKERS OF THE WORLD



**RUSSIA**  
(41)  
+ 5 under construction  
+ 6 planned



**USA**  
(5)  
+ 1 planned





**Polar Sea**  
(1978 refit 2006)



**Polar Star**  
(1976 refit 2013)



**USCG Polar Icebreaker**  
(TBD)



**Aiviq**  
(2012)

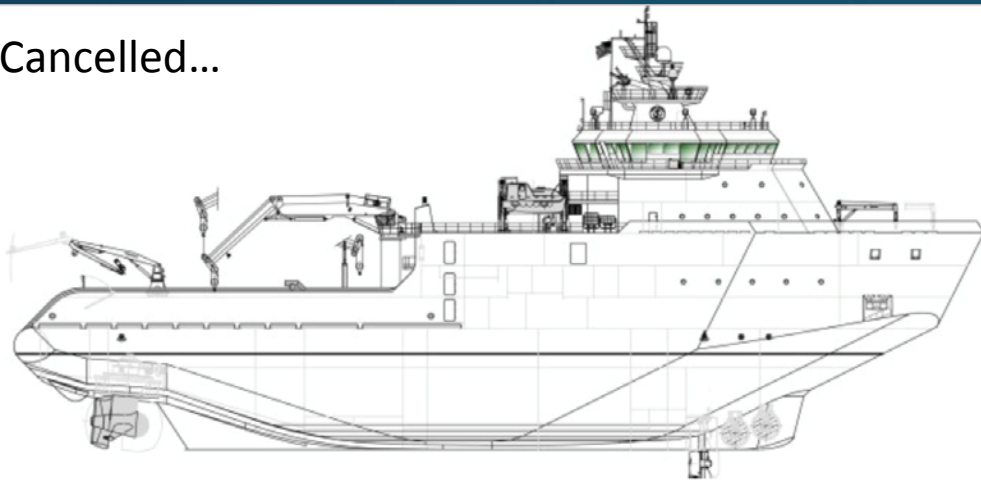


**Healy**  
(2000)



**Nathaniel B. Palmer**  
(1992)

Cancelled...



*Sikuliaq*

R/V Sikuliaq seen from the "headstone" along the line of the performance test. Photo by Roger Topp

5750 BHP



# What's the USG requirement?

DHS and USCG: 6 icebreakers (3 heavy & 3 medium)

July 2010: USCG High Latitude Study: 6 (3 and 3)

June 2012: Papp: 6 (3 and 3). \$3.2B

June 2013: DHS: 6 (3 and 3)

Feb. 2015: Zukunft: 6 (3 and 3)

3/5/15 in Senate hearing.

*Papp said, "You can get wrapped around the axle saying do we need six (icebreakers), do we need three and three, or four and two?"*

*Whatever it may be, there's a least a need for one and we haven't even started on the one yet."*

# 6 (3 & 3)

But Pres. Obama is stretching for 2....



## Requested in the President's budgets...

**FY13:** New project to design and construct a polar icebreaker, \$860M over 5 yrs for procurement. DHS anticipates awarding construction contract “within next 5 yrs” (i.e., by FY18), and taking delivery “within a decade” (i.e., by FY23)

**FY14:** Funding request reduced to \$230M but still stated that DHS anticipated awarding a construction contract “within the next four years” (i.e., by FY18)

**FY15:** Still \$230M, but no mention of a construction contract...

**FY16:** Request further reduced to \$166M, no statement on construction contract

**FY17:?**

## What did USCG ultimately get...?

FY13: \$7.6M

FY14: \$2

FY15: \$0 ?

FY16: \$4

FY17: \$?

And has, since 2013, been using it, in part, to develop the operational requirements for the new heavy polar icebreaker.

An interagency effort...

USCG's requirements should be completed by early next year?

## President Obama's visit to Alaska...& commitments

**9/1/15 White House fact sheet:** says procurement date will be accelerated from FY22 to FY20. **Hmm**...originally, in FY13 & 14 requests, procurement was in FY18. But now stated as FY22, & reduced back to FY20, which is thus a 2-yr deferral.

Sheet also says that the Admin. will also “begin planning for construction of additional icebreakers” beyond the one that the Administration proposed to procure in FY2020.

**Now...?** Waiting to see what's in FY17 request...

# Heavy gap?

1. Icebreaker procured in FY20 may enter service 2024 or 2025.
2. *PSTAR* refurbished and reentered service 12/12 for 7 to 10-yr period, thus ending 2019 to 2022.
3. Unless *PSTAR* is further extended, or *PSEA* repaired and returned to service, there will be a period of between 2 to 6 years during which the US will have no operational heavy icebreakers

# Want kit?

...then you gotta pay for it.

- USCG is addressing the need for future icebreaking capability through an ongoing acquisition.
- A new, heavy polar icebreaker is being designed to meet the requirements of multiple government stakeholders that require access to and presence within the polar regions.
- To appropriately fund the acquisition, a “whole-of-government” funding approach is necessary.



# Congress...

**How will it respond?** Approve, reject or modify President's plan to sustain and modernize the polar icebreaking fleet?

FY16

- Recommends \$4M for polar icebreaking vessel
- "...believes that shared funding among stakeholder agencies is a more appropriate method of funding..."\*

\* From FY16 DHS Appropriations Act (H.R. 3128/S. 1619)

# DHS OIG report 2011

## Arctic Missions Not Being Met

Requesting Agency	Missions Not Being Met
United States Coast Guard	—Fisheries enforcement in Bering Sea to prevent foreign fishing in U.S. waters and overfishing —Capability to conduct search and rescue in Beaufort Sea for cruise line and natural resource exploration ships —Future missions not anticipated to be met: 2010 Arctic Winter Science Deployment
NASA	Winter access to the Arctic to conduct oceanography and study Arctic currents and how they relate to regional ice cover, climate, and biology
NOAA and NSF	Winter research
Department of Defense	Assured access to ice-impacted waters through a persistent icebreaker presence in the Arctic and Antarctic <sup>75</sup>

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# Positive developments...

- USCG establishes 8-nation Arctic Coastguard Forum
- DHS is supporting *Healy* missions
- DHS supported Arctic Domain Awareness Center (up to \$17M)
- USCGA has “Center for Arctic Strategy and Policy”