U.S. Arctic Research Commission



John Farrell UNOLS/AICC December 3, 2008





Mead Treadwell, Chair



Michele Longo Eder



Helvi Sandvik



Virgil (Buck) Sharpton Vera Kingeekuk Metcalf





Warren Zapol



Charles Vörösmarty



~\$400M/yr across >15 federal agencies

...cooperating with over a dozen nations

...using research infrastructure worth billions





Research Themes

- Ocean Environmental Change
- Arctic Human Health
- Civil Infrastructure
- Natural Resource Assessment & Earth Science
- Indigenous Languages, Identities, Cultures



Ocean Environmental Change

- •Grow Arctic Observing Network
- •Tie research more closely to CCSP and CCTP
- •Tie monitoring to GEOSS
- •Agencies we hope will cooperate:

•NSF, NOAA, NPRB, DOI, NASA, NSSI, Alaska



Recent USARC Icebreaker/USCG Activities

- Treadwell addresses USCG's "Flag Conference" 4/16
- Mead Treadwell's congressional testimony
 - Senate Committee on Commerce, Sci. & Trans. 7/24/08

- House Coast Guard and Maritime Transportation Comm. on Transportation and Infrastructure 7/16/08 (w/Commandant Allen and Dr. Bement)

- "Inside baseball" with Congress, OSTP, OMB, Executive agencies, etc.
- Govt-wide review and development of new Arctic policy (HSPD/NSPD)
- Arctic Marine Shipping Assessment (thanks USCG...)
- Media outreach (*Parade* Magazine (6/1) *NY Times* (8/17), *Anchorage Daily News*, television/radio (U.S. and Japan)
- USARC intern (Middie) hosted by D17 for C-130 Arctic MDA overflight
- USARC to meet with VADM Pekoske 12/16/08 in Alameda

The New Hork Eimes nytimes.com

August 17, 2008

A Push to Increase Icebreakers in the Arctic

By ANDREW C. REVKIN



"...experts provided telling snapshots of maritime activity to legislators and other officials from Arctic countries at an international conference last week in Fairbanks, Alaska. For example, **Mead Treadwell**, who attended the conference and is an Alaskan businessman and the chairman of the research commission, said officials were told that more than 200 cruise ships circled Greenland in 2007, up from 27 in 2004.

Lawson W. Brigham, chairman of the three-year Arctic Marine Shipping Assessment that is scheduled to finish work this year, told the gathering that more than 5,400 vessels of 100 tons or larger operated in Arctic waters in the summer of 2004. During that summer there were 102 trips in the Northwest Passage and five complete transits of that legendary route, he said."

PR

Icebreakers in stimulus?

5

S. 3689 (Senator Reid's bill, most legs?) contains funding for icebreakers.

Senate in session next week to consider an automakers' aid plan but unlikely they'll consider legislation beyond an automakers' bill.

Obama, however, has made it a priority to pass an economic stimulus as early as January, and it is expected that Reid will re-introduce S. 3689. COAST GUARD

6 ACQUISITION, CONSTRUCTION, AND IMPROVEMENTS

For an additional amount for "Acquisition, Construc-7 tion, and Improvements", \$1,220,000,000, to remain 8 available until expended; of which \$925,000,000 shall be 9 10 for the acquisition of a new polar icebreaker or for nec-11 essary expenses related to the service life extension of existing Coast Guard polar icebreakers; of which 12 \$150,000,000 shall be for the National Security Cutter 13 14 program; and of which \$145,000,000 shall be for shore facilities and aids to navigation facilities: *Provided*, That 15 16 no later than 90 days after the date of enactment of this Act, the Secretary of Homeland Security shall provide the 17 Committees on Appropriations of the Senate and the 18 19 House of Representatives a plan for the expenditure of 20 these funds.

ARCTIC MARINE SHIPPING ASSESSMENT Scenarios of the Future



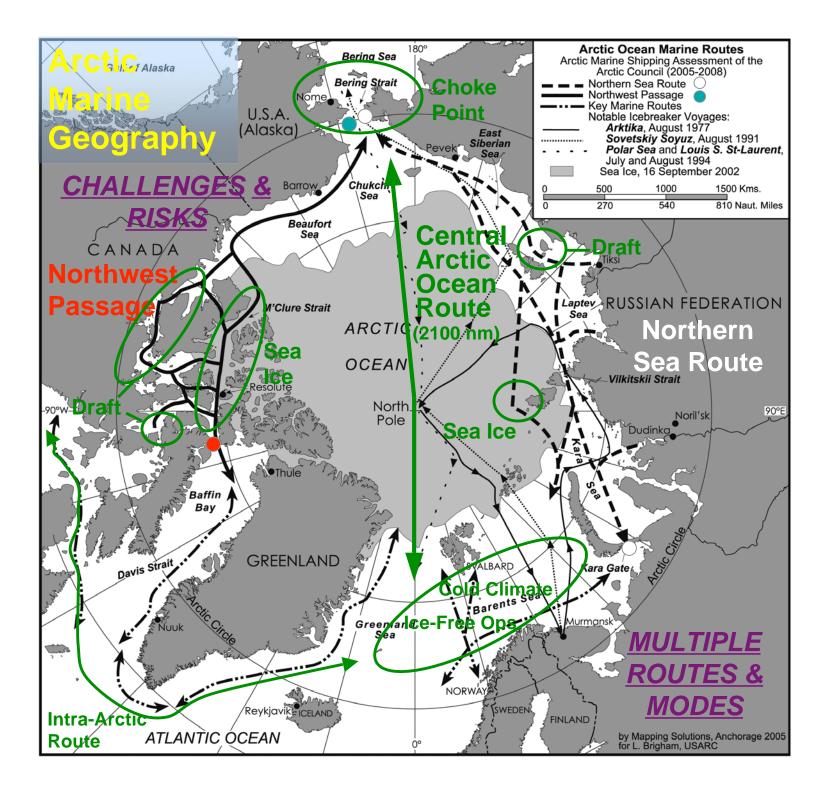
Trillion Dollar Issues

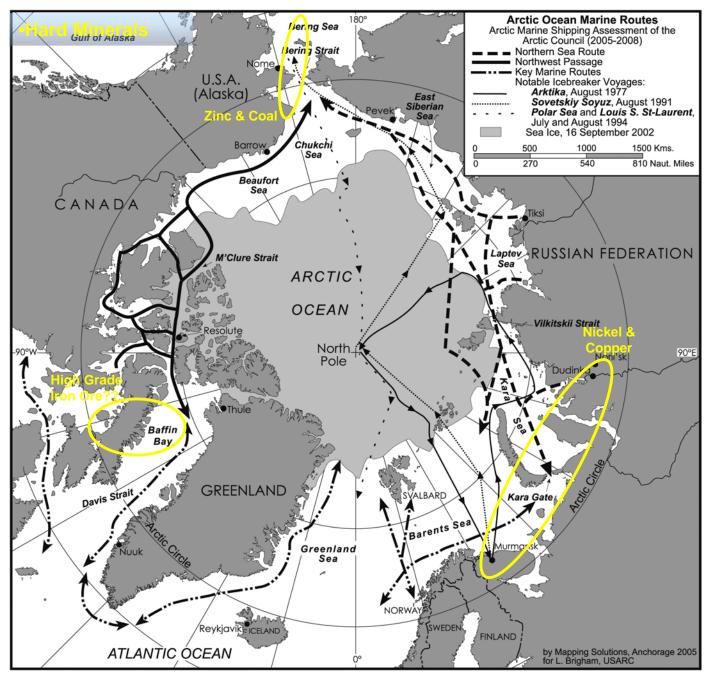


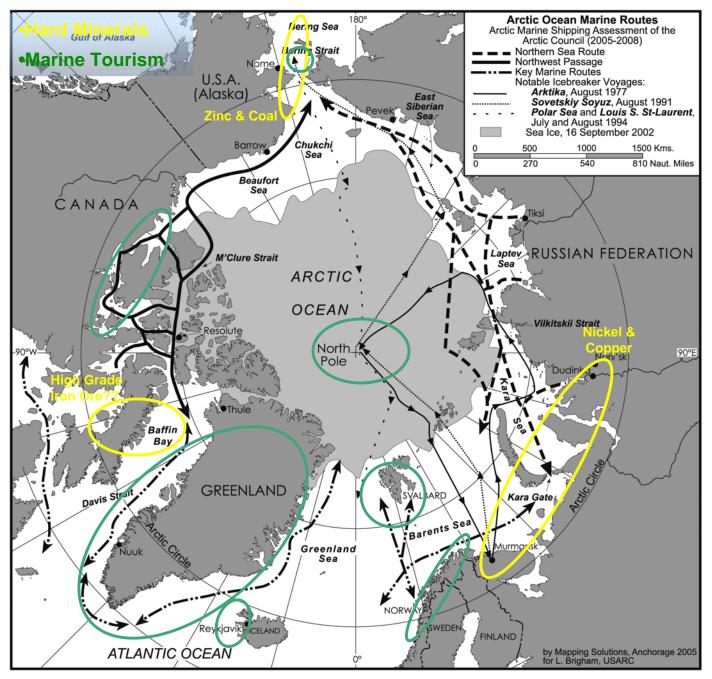
ARE RESEARCH COUNS

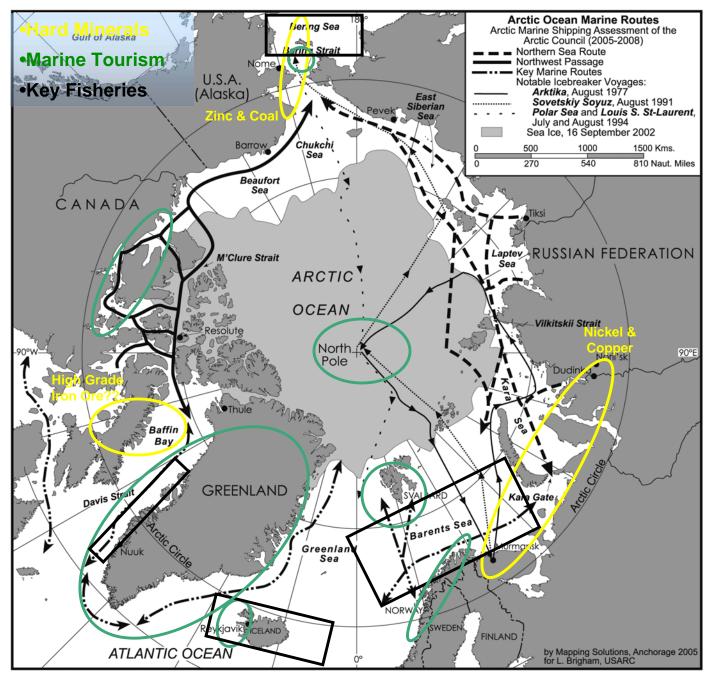
Arctic Council, PAME-led Arctic Marine Shipping Assessment

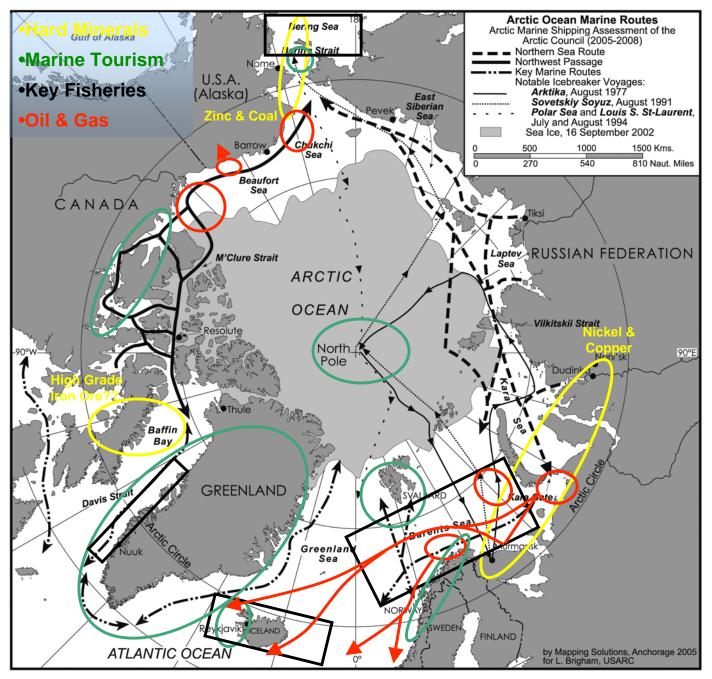
- Lead Countries: Canada, Finland, and USA
- Key Countries & Regions: Norway & Russia (Norwegian-Barents-Kara seas), Iceland, Denmark-Greenland-Faroe Islands, Sweden
- *Timeline*: 2005 April 2009
- Electronic Survey ~ 2004 Data Collection from the Arctic States
- Arctic Town Hall Meetings ~ Permanent Participants
- Focus ~ Marine Safety & Marine Environmental Protection
- Inclusive Participation: Member States, Permanent Participants, Council Working Groups; Council Observers; Shipping Industry; Ship Classification Societies; Research Organizations; Others

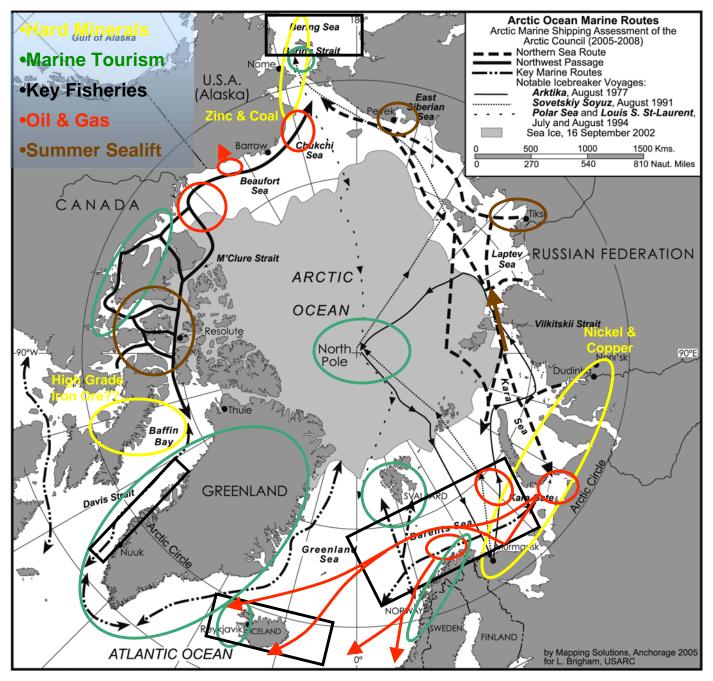


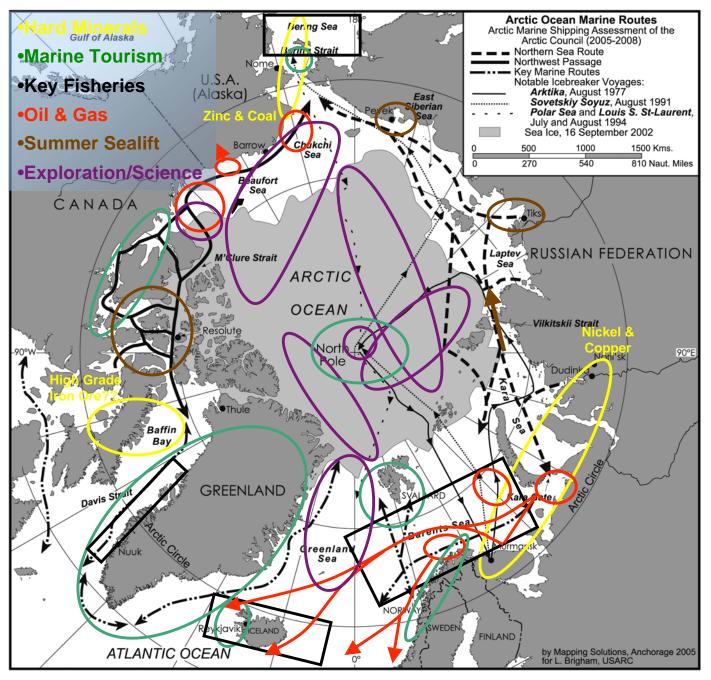


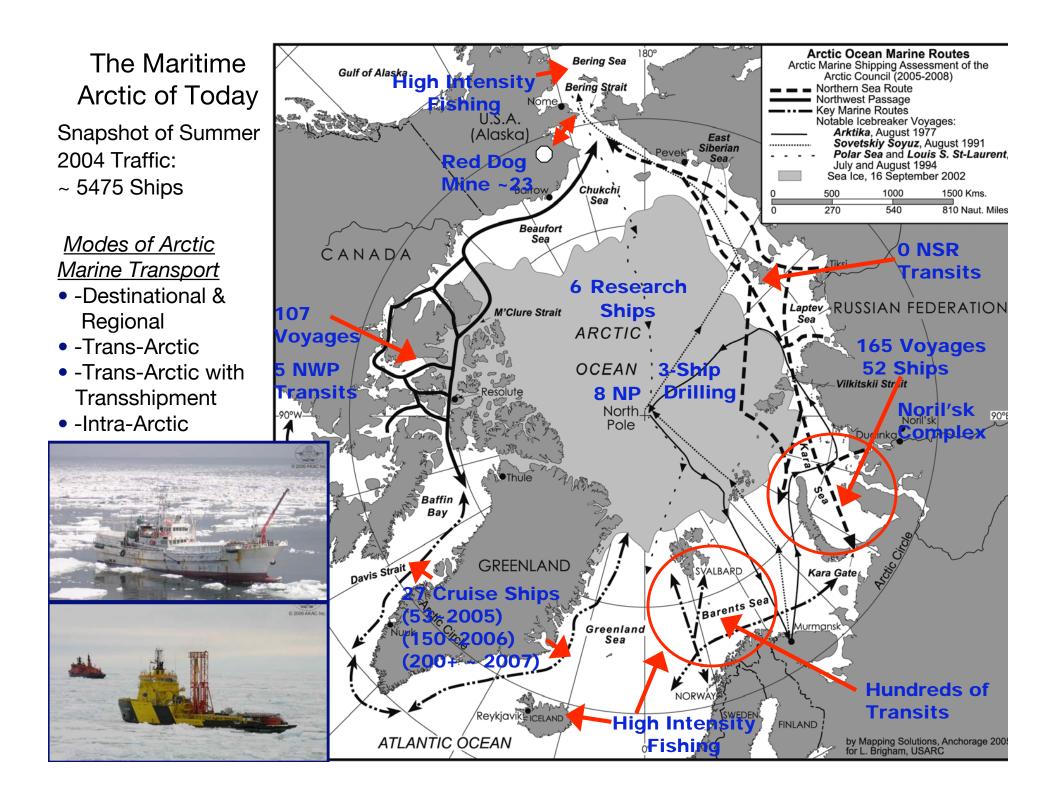




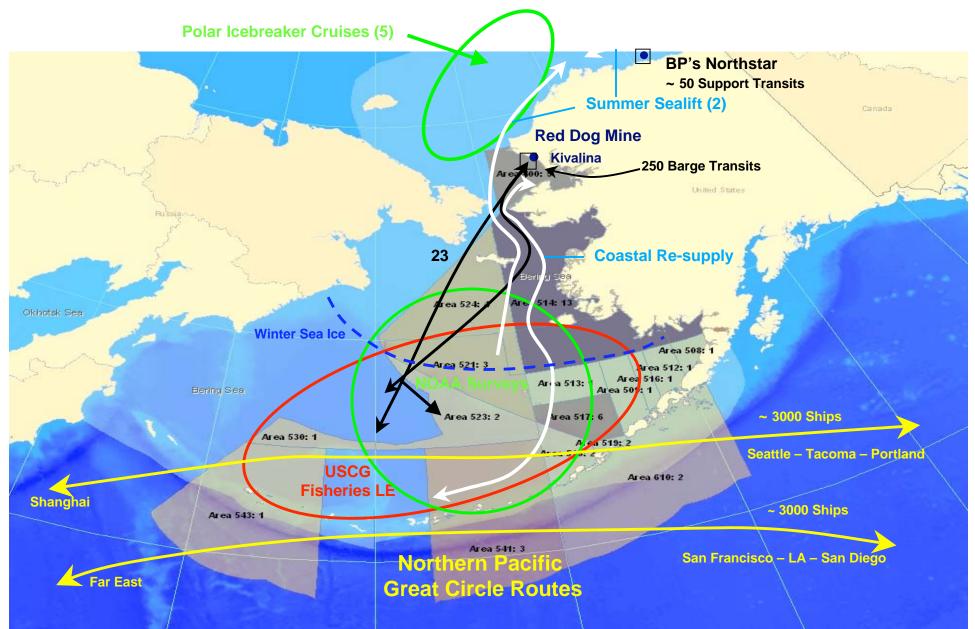








U.S. AMSA 2004 Data Survey





The Act of Regulating CO₂

The Area of the control U.S. grant acting the acting manufactory cognized trade system may take years. So the near provident with have to decide whether the regulation acting durate emissions by using the authority granted the executive branch undier the Osan KirAd. Last year, the U.S. Supreme Court ruled that greenhouse gases are a pollutant that the government can regulate McCain says he doesn't think the act is the appropriate vehicle, whereas Ohama says he might use it whaters dawdie on legislating greenhouse gas limits. Climates dentists say there's no time to weste

Cold Cash for the Poles

The strikting Article cap is expected to trigger an economic free-for-all among polar-going nations seeking to take advantage of shorter shipping routes and untapped natural resources. Ironically, less sea low will increase demand for ischreakers capable of ensuring sele passage through the onceinacces sible region.

Attooph several European nations have beefed up their flexts in response to such opp or funities, the Bush Administration has gone in the opposite direction: Three year sago, it shifted budgetary responsibility for three is breakers from the U.S. Coast Guardto the National Science Foundation, a requiring that science is the briggest user all to the polarity international science hapresentatives has voted in favor of building two new kstavakers, in line with recommon dations in a 2006 U.S. National Academies report. An Antic pality review being completed by the current Administration is expected to see up the issue for the next president, who must decide whether to seek funding for the billion-dollar ships.

Pick a Planet The next president may have a lot to worry about at home, but he'll also have to think

bout the outer solar system. NASA plans to decide in Januar y whether to launch a multibillion-dollar spacecraft to Jupiter or Saturn, kicking of work on the agency's most ambi-tious space science effort in its 50-year history. That means the agency will need in owasing duritis of an mail funding, starting in the 2010 fiscal year that begins next October, to begin design of a spacecraft that will visit one of the two planetary systems. Launch of the probe, which may include landers for invian or saturnian moons, would likely come near the end of the next decade. W: Cain has been silent on NKSA's space science effort, but Obama has pledged to support a new generation of probes The victor may also hear from advocates for a sample-return mission to the Red Planet instead.

Small Comfort

Long touted as the next "big thing," nanotechnology is air such moving from research to and obtain a the fract log timing - nanosenhood of a weight normal momentarials, according to a market. Some 5.50 billion worth of products already contain nanomaterials, according to a 2004 estimate. Bit softey concerns continue to dog the emerging field. Nanomaterials are easily absorbed by a variety of oals and tissues, with largely unknown effects. A bill to increase each at a contrar by a variety or cash at an associated, when any operation in the second second and the second se

A Full Serving of Science Awaits the Next President

Many scientific issues are never discussed during the campaign. But ignoring them doesn't make them disappear. Here are 10 meaty topics that we think the 44th president will have to chew on



Polar Research is in the Big 10

Science October 24, 2008

Being a Team Player

Can be deal of Materia na relative parts or in international scientific calculations of the specify elimitation by a specific term of the specific distribution o later chains their is easily a term actual if their gamer some it can be cannoted upon a, expectably if the electrons much as it is if an U.S. will. But multiplear your diag upper unit is part ably up too decam although both consists on your pledge allegies at to the principle of global as operation in minority the nervell used to maintain good time of h Congruent a deliverum any agreement to chose the cost of expression

Combating Bioterrorism The control mission will be used to be be taken as a decourter valued and det the science research is says that advance to date as the row board the support date by the bits. Not taken a latent to be a failed and the failed and the support date by I allest makes to other amortagist of such essential that i of oder getting scientists to indicate if Their projects and if he minuscul and having give that insul carmoi flows, emission projects that a a red Eng. Mitt 10 trains likel the avertight from even's last year to the Day action est of Peul's a Territory. But th eth actat design it takes is not expected to its its the jak before it leaves all as O MC ais have not saized the income during the same paign.

Taking (Nuclear) Stock

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Fishing for Answers

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Cold Cash for the Poles

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Although several European nations have beefed up their fleets in response to such opportunities, the Bush Administration has gone in the opposite direction: Three years ago, it shifted budgetary responsibility for three icebreakers from the U.S. Coast Guard to the National Science

Foundation, arguing that science is the biggest user at both poles. The House of Representatives has voted in favor of building two new icebreakers, in line with recommendations in a 2006 U.S. National Academies report. An Arctic policy review being completed by the current Administration is expected to tee up the issue for the next president, who must decide whether to seek funding for the billion-dollar ships.

ARCTIC RESEARCH GOALS, UPDATES, AND OPPORTUNITIES

Thursday, December 18, 2008 • 6:15 pm to 8:30 pm Moscone West, Room 2002 • 4th Street • San Francisco, CA

Come hear updates and opportunities on Arctic research from leaders

in the scientific community • Refreshments will be served

