

3/12 report to the AICC

John Farrell

Executive Director
U.S. Arctic Research Commission



Duties of the Commission:

- Develop Arctic research policy
- Facilitate Arctic research cooperation
- Review federal Arctic research programs
- Data sharing among Arctic research entities
- Cooperate with the State of Alaska
- Improve international scientific cooperation in the Arctic

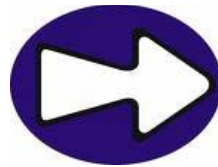
Federal Arctic research policy/process



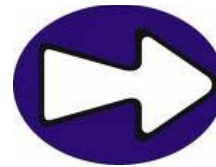
IARPC 5-year plan
1st draft completed
Public review soon



USARC: Set goals; build international cooperation, work with Alaska



IARPC: adopt plans; coordinate



White House: OMB/OSTP
Congress: Authorizers & Appropriators

Ecosystem-based Management



Arctic Environmental Response Management Application

The screenshot displays the ERMA Arctic web application interface. At the top left, the logo "ERMA" is followed by "Environmental Response Management Application Arctic". Below this is a navigation bar with links for "Information", "Help", "Admin", "Upload", and a search box labeled "Find". A "Logout" link is located in the top right corner. The main map area shows a satellite-style view of the Arctic region with several data layers overlaid: a red area representing sea ice extent, black lines for shipping routes, and red dots for ports and oil infrastructure. A vertical scale bar is on the left side of the map. On the right side, there is a legend panel with the following sections:

- Layers Legend Query Tools AOI Labels Zoom Download Print
- Imagery and Remote Sensing
 - Blue Marble Imagery - December
- Ice Extent
 - Multisensor Analyzed Sea Ice Extent (MASIE), Northern Hemisphere, 4 km (NSIDC)
- Transportation
 - US Shipping Routes
 - US Shipping Routes
- Ports (PAME, 2009)
 - Ports (PAME, 2009)
- Oil Infrastructure
 - Chukchi Sea OCS Exploration Wells (BOEMRE)
 - Chukchi Sea OCS Exploration Wells (BOEMRE)

At the bottom of the map, the Google logo is visible. Below the map, the status bar shows "Scale: 1: 28M", "Zoom Level: 4", and "Location: 66.22490°,-124.16016°". A "clean" button and a right arrow are also present. At the very bottom, there is a footer with the text "US DOC | NOAA | NOS | NOAA Office of Response & Restoration" and "Coastal Response Research Center 92007 - 2011 University of New Hampshire".

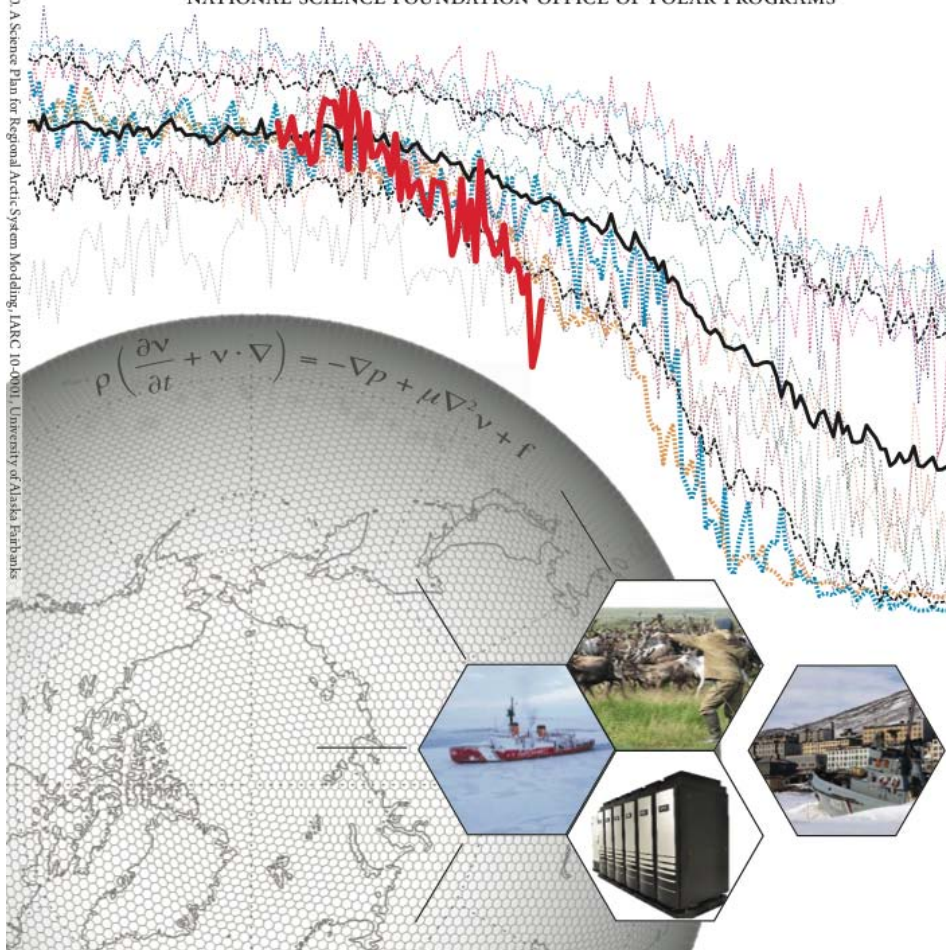
Integration, synthesis, modeling

A SCIENCE PLAN FOR
REGIONAL ARCTIC SYSTEM MODELING
A REPORT BY THE ARCTIC RESEARCH COMMUNITY
FOR THE
NATIONAL SCIENCE FOUNDATION OFFICE OF POLAR PROGRAMS

*“Models without data
will never get you to reality.”*

*Data without models
will never get you to the
future.”*

-RADM David Titley





Self-subscribe to the update at arctic.gov

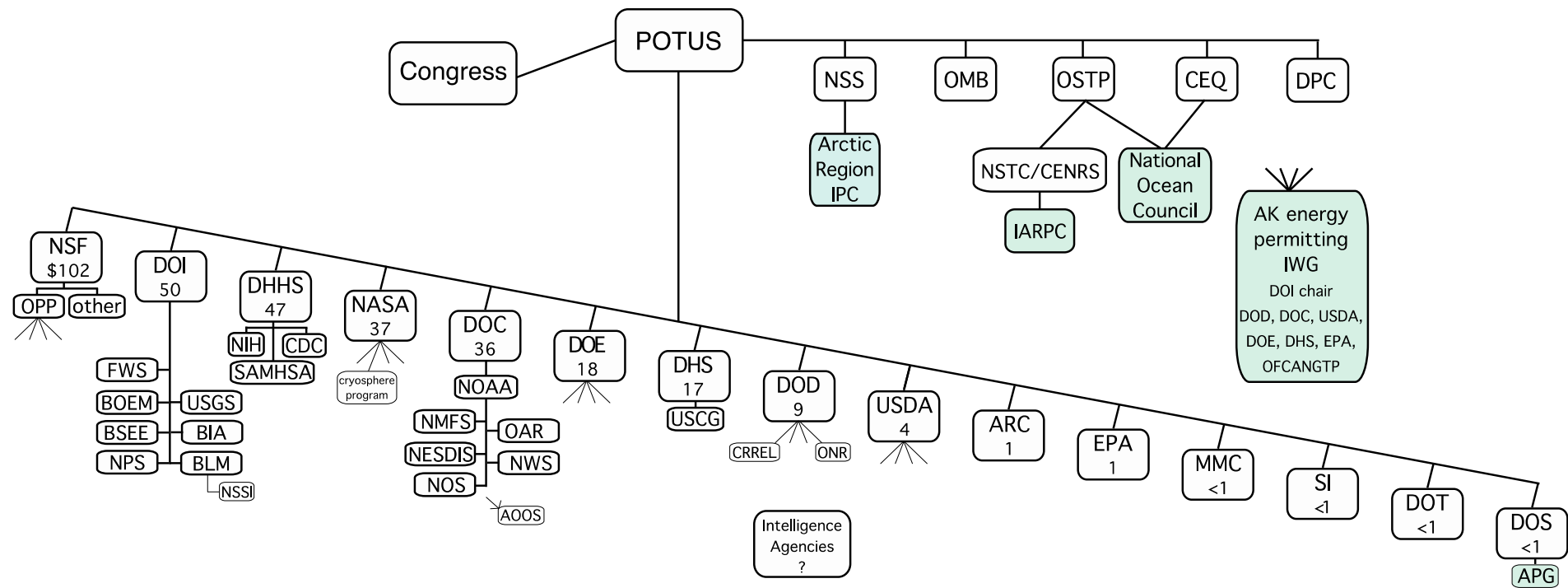
Focuses on research. Over 600 subscribers.

Newsletter structure:

- Today's Events
- Media
- Legislative Action
- Future Events



Arctic research in the Federal government



Budget figures, in million \$, are for FY05, as self-reported by IARPC members and reported in "Arctic Research of the US" vol. 20, published by NSF in 2006

Arctic Org Chart

organizational charts for Alaskan Arctic Research Groups (USARC)

Cheryl Rosa

15 March 2012



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ACCAP
SNAP
Social Science



University of Alaska

BP
Pioneer
Conoco Phillips

Draft National Ocean Policy Implementation Plan

National Ocean Council



An America whose stewardship ensures that the ocean, our coasts, and the Great Lakes are healthy and resilient, safe and productive, and understood and treasured so as to promote the well-being, prosperity, and security of present and future generations.

Changing Conditions in the Arctic

Address environmental stewardship needs in the Arctic Ocean and adjacent coastal areas in the face of climate-induced and other environmental changes.

5 “actions”

1. Improve Arctic environmental response management
2. Observe and forecast Arctic sea ice
3. Implement a distributed biological observatory
4. Enhance communication systems in the Arctic
5. Advance Arctic mapping and charting

Each “action” has specific outcomes, agencies, & milestones

DBO

Outcomes

A distributed biological observatory will help experts track and understand changing environmental conditions in the Arctic.

Agencies: NOAA, USFWS

Milestones

- Conduct and coordinate multi-year DBO research cruises with Federal, State, and international partners to document change in distribution, abundance, biomass, species composition, and rates of primary production at two of five stations along the DBO latitudinal gradient. (NOAA; 2012)
- Review pilot DBO activities and plan upcoming cruises in collaboration with international partners via Pacific Arctic Group meetings. (NOAA; 2012)
- Complete pilot phase analysis and prepare international report on distributed biological observatory activities and results to date. (NOAA; 2013)
- Update DBO concept and Implementation Plan for longer-term implementation. (NOAA, USFWS; 2014)
- Execute DBO plans and prepare annual assessments on physical and ecological state of Pacific Arctic marine environment. (NOAA, USFWS; 2015)

Arctic Collaborative Enviro. (ACE) (DOD/OSD funded Arctic observing)

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ACE overview

- **Web-based, open-access, Arctic-focused, environmental decision-support system**
- **Integrates data from existing remote sensing assets and in situ observations**
- **Provides monitoring, analysis, and visualization based on earth observation data and modeling**
- **Enable local, regional, and international cooperation and coordination on long-term environmental planning and near-term actions in response to climatic and environmental changes occurring in the Arctic Region.**

- **Partners**
 - **OSD**
 - **COCOM Sponsors and operational managers: USEUCOM and NORAD-USNORTHCOM**
 - **Technical Manager: NASA MSFC**
 - **Transition Manager: Von Braun Center for Science & Innovation (VCSI)**
 - **Other Partners: NOAA, NIC, USCG, Navy Task Force Climate Change, UAHuntsville, AMRDEC, DLR (German Space Agency), CRREL, ORNL, SAON, Norwegian Polar Institute, AARI (through MOA with NOAA)**

Senate bill

\$400M endowment gives \$20M/yr to NPRB
With “input and assistance” from USARC

112TH CONGRESS
2^D SESSION

S. 2147

To provide for research, monitoring, and observation of the Arctic Ocean
and for other purposes.

IN THE SENATE OF THE UNITED STATES

MARCH 1, 2012

Mr. BEGICH introduced the following bill; which was read twice and referred
to the Committee on Commerce, Science, and Transportation

Users can choose from extensive Arctic data catalog of open access information

The screenshot displays the Arctic data catalog application interface. At the top, there is a navigation bar with links for Home, Browse Collections, View Map, Contact Us, and Logout, along with a search bar. Below the navigation bar, the application is split into two main panels. The left panel, titled 'Layers', contains a legend and a list of data sources categorized by type (Image, KML, RSS Feed, WCS, Webcam, Webpage, WFS, WMS). The right panel is divided into two sub-panels: 'Map View' and 'Google Earth View'. The 'Map View' panel shows a 2D map of Alaska and the surrounding Arctic region, with labels for 'Desuori Sea', 'Chukchi Sea', 'Alaska', 'Yukon', and 'Gulf of Alaska'. The 'Google Earth View' panel shows a 3D satellite view of the same region. The bottom of the screenshot shows a Windows taskbar with various icons and a system tray area.

Arctic data catalog includes web sites, KML/KMZ feeds, OGC compliant data and other geospatial sources that will allow GIS-enabled queries within the ACE application