



Understanding Arctic Change Task Force & White Paper and SEARCH

Hajo Eicken (hajo.eicken@gi.alaska.edu)

Understanding Arctic Change Workshop, Seattle, 29 Sept 2010

<http://www.arcus.org/SEARCH/index.php>

SEARCH Objectives

The overall objective of SEARCH is to

Understand the nature, extent and future development of the system-scale change presently seen in the Arctic.

SEARCH is built around three basic elements:

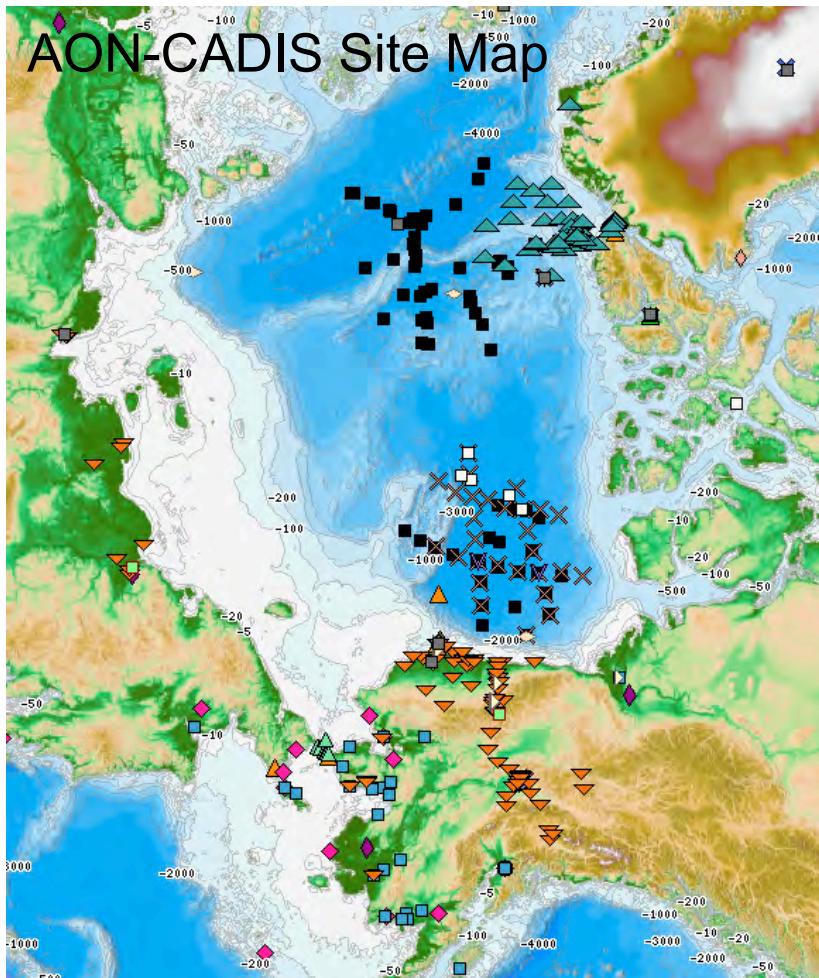
- **Observing Change** - Observing Network well underway
- **Understanding Change** - Underway but guidance needed!
- **Responding to Change** - Exploratory activities underway



www.arcus.org/search/



Arctic Observing Network (AON)



- Roughly 40 NSF-supported AON projects
- Data dissemination and archival at Coop Arctic Data & Information Service www.aoncadis.org
- State of AON:
 - Scientific community, federal/ state/local agencies, stakeholders and general public all with a vision for an Arctic observing system
 - Now is the time to parse these perspectives and consolidate long-term observing efforts



AON Design & Implementation (ADI)

- **Evaluate** status of AON relative to science questions
- **Aid design & adaptation** of AON components through rigorous, quantitative approaches
- **Synthesize** information from current AON & design studies to guide optimization and implementation
- **Coordinate** between national & international efforts

- Membership: 14 experts representing Arctic (8) and lower-latitude (6) perspectives
- Workshops & proof-of-concept studies, report in 2011
- Resources and status information available at:
<http://www.arcus.org/search/aon/>

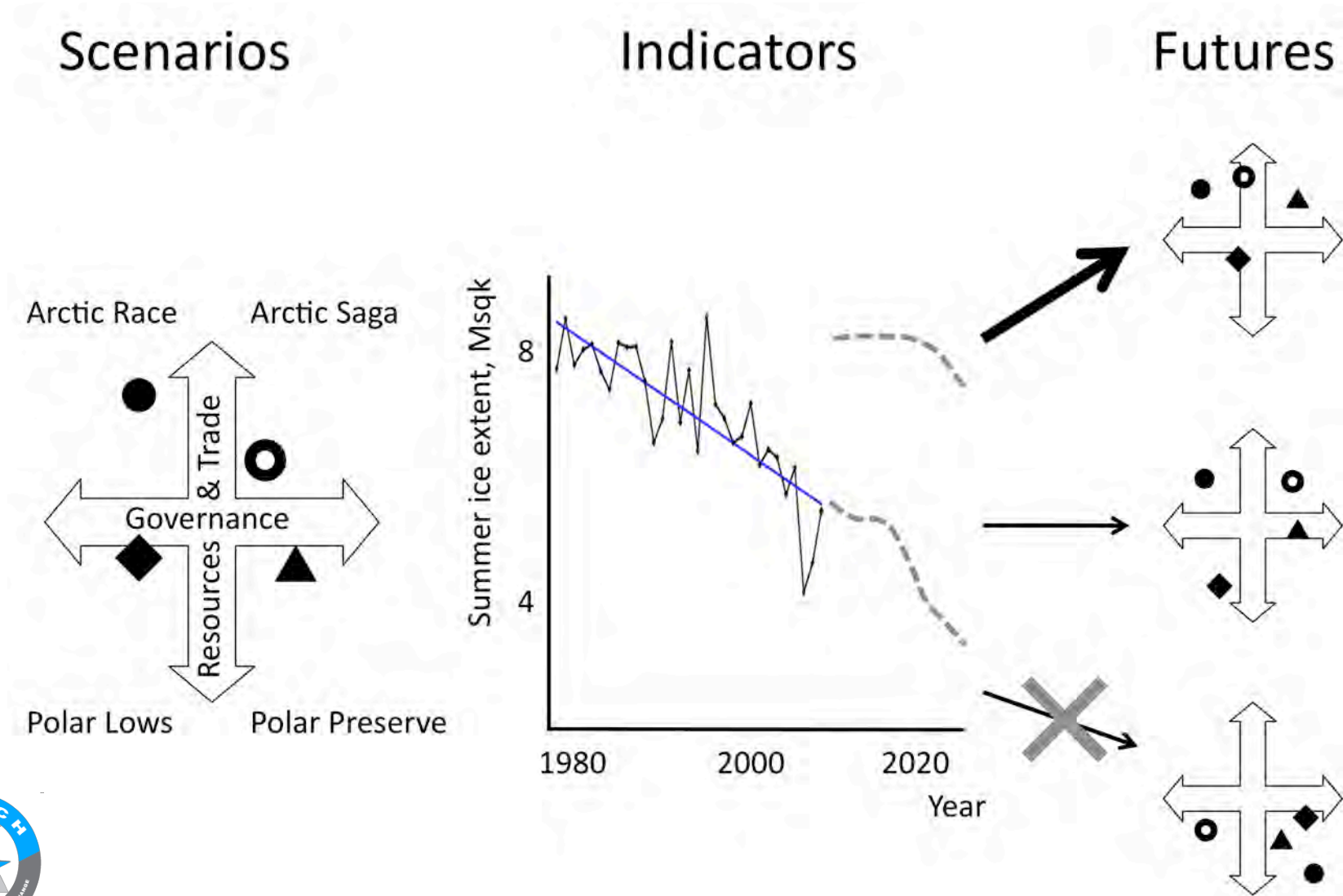


AON/SEARCH Interagency Working Groups

- Identify existing observing assets, activities & data relevant to working group theme
- How can assets/activities be coordinated for cooperative, interagency observing system?
- Develop joint planning approaches
- Address challenges, such as how to provide data & information required by agencies & managers
- Annual joint Arctic observing summit to review and coordinate long-term observation activities by NSF-supported researchers, agencies and others



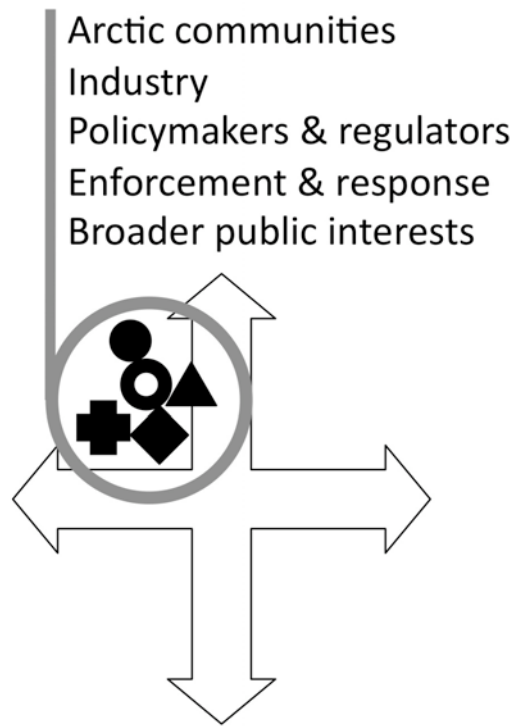
UAC: Exploring the Arctic system, guiding observations of its behavior & navigating the decision space



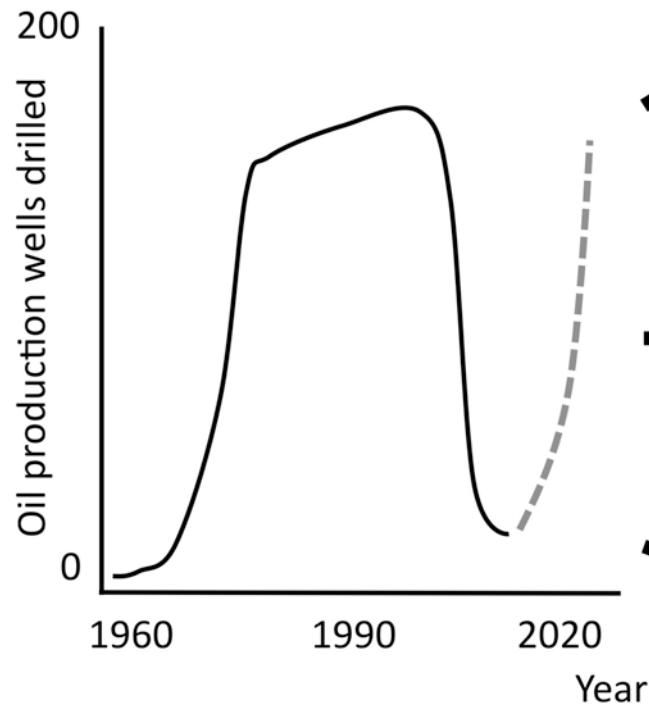
Data: AMSA 2009; NSIDC 2010 & Stroeve et al. 2007 (in: Eicken & Lovcraft, subm.)

UAC: Exploring the Arctic system, guiding observations of its behavior & navigating the decision space

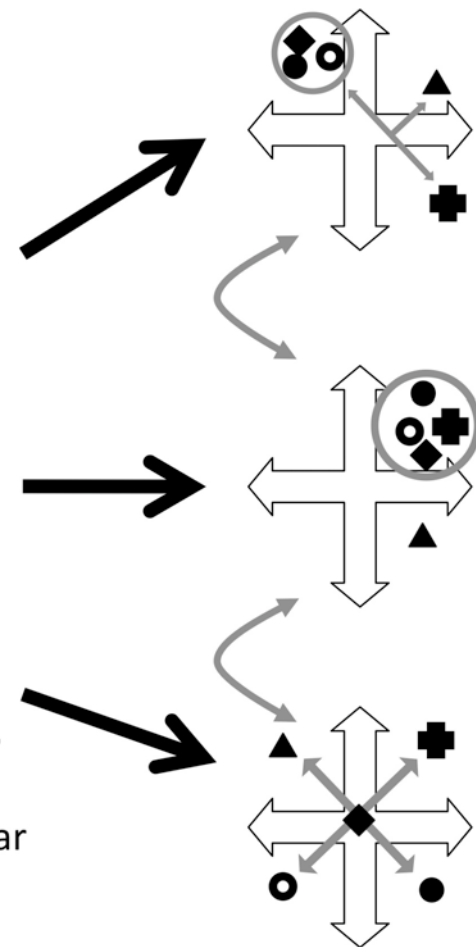
Present state



Driver/
indicator



Futures



Data: AMSA 2009; Thurston (subm.) (in: Eicken & Lovecraft, subm.)

UAC & SEARCH

- Guideposts to SEARCH and broader community to stimulate new research & collaboration
- Reference for NSF and in particular other agencies with interest in SEARCH to maximize synergy and coordinate planning
- Valuable input to AON Design & Implementation Task Force and early planning phase of Responding to Change activities
- Help SEARCH SSC refine & advance SEARCH vision & its implementation

