SEARCH for DAMOCLES ("S4D")

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http://www.arcus.org/SEARCH/index.php
Outline

- The SEARCH Program
- SEARCH for DAMOCLES
- Next Steps
Goal of SEARCH

SEARCH is a U.S. multi-agency program designed to understand the nature, extent, and future development of arctic change.

- **Interrelated arctic changes** are occurring across terrestrial, oceanic, atmospheric, and human systems.

- Observed changes have **significant impacts** on ecosystems and society.

- **Anthropogenic activities** are a major cause of the observed changes.
Development of SEARCH


- **Multi-agency sponsorship** 8 U.S. agencies - NSF, NASA, NOAA, Department of Defense, Department of Energy, Department of the Interior, Smithsonian Institution, Department of Agriculture.

- **Open Science Meeting 2003** assessed the state of arctic change science and established research priorities.

- SEARCH **Implementation Workshop 2005** - plan for IPY and beyond.
SEARCH Activities & Implementation

- **Over 150 projects and activities:** “Observing”, “Understanding”, and “Responding” to change

  - **Observing Change:** Ocean and Sea Ice, Atmosphere, Hydrology and Cryosphere, Terrestrial Ecosystems, Human Dimensions, Paleoclimate

  - **Understanding Change:** Modeling and Analysis

  - **Responding to Change:** Applications focused on social and economic concerns

- **International connections:** Expanding international connections
The SEARCH for DAMOCLES (S4D) partnership was established to:

- Coordinate systematic ocean, atmosphere and ice observations
- Consolidate long-term observations required for documentation and modeling of change
- Establish common European/U.S. databases and contribute to international programs
S4D Steering Committee

- Jean-Claude Gascard, co-chair, Universite Pierre et Marie Curie
- Peter Schlosser, co-chair, Columbia University
- Cecilie Mauritzen, Norwegian Meteorological Institute
- Hajo Eicken, University of Alaska
- Ralf Döscher, Swedish Meteorological and Hydrological Institute
- John Walsh, International Arctic Research Center
- Greta K. Hovelsrud, Center for International Climate and Environmental Research
- Jack Kruse, University of Massachusetts
- Øystein Godøy, Norwegian Meteorological Institute
- Matthew Berman, University of Alaska
- Klaus Dethloff, Alfred Wegener Institute
- Mark Parsons, National Snow and Ice Data Center
- Ursula Schauer, Alfred Wegener Institute
Possible S4D Next Steps

SEARCH has moved from planning stage to implementation stage and is now well-placed for research coordination activities within the S4D framework:

- **Assessment and comparison of funded activities** within SEARCH and DAMOCLES to advance integration of Arctic Ocean research
  - SEARCH has begun a comprehensive assessment of currently funded SEARCH-related activities in the U.S.

- Potential **future workshops** (spring 2008, follow-up to October 2007 Paris workshop)
  - Integration: Ongoing observing and analysis activities. Specific science foci- causes and consequences of the unexpectedly rapid decline in the arctic sea-ice cover during 2007, others...
  - Autonomous and Lagrangian platforms in an Arctic Ocean with shrinking ice
Thank You

SEARCH Website:
http://www.arcus.org/SEARCH/index.php

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