



Southwest Fisheries Science Center
NOAA Fisheries Service



PaCOOS: the Ecological Observing System for the California Current

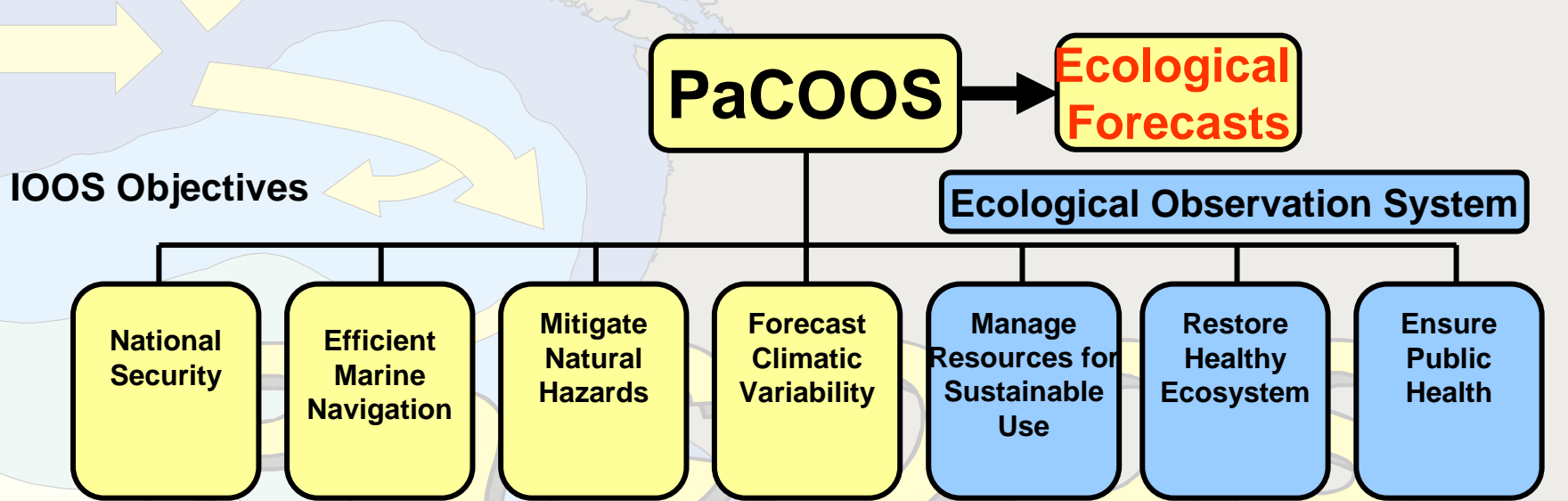
PaCOOS

Update and Request from the PICES Governing Council

Jonathan Phinney
Assistant Center Director
NOAA Fisheries (SWFSC)
October 2006

John Stein
Deputy Science Director
(NWFSC)

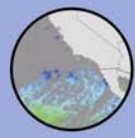
IOOS: Integrated Ocean Observing System



POTENTIAL Ecological Forecasts:

Sardines, Hake, Salmon, Harmful Algal Blooms

Climate Regime Shift



Climate



North Pacific Current

PaCOOS Now

Developing the Ecological Observing Backbone for the California Current

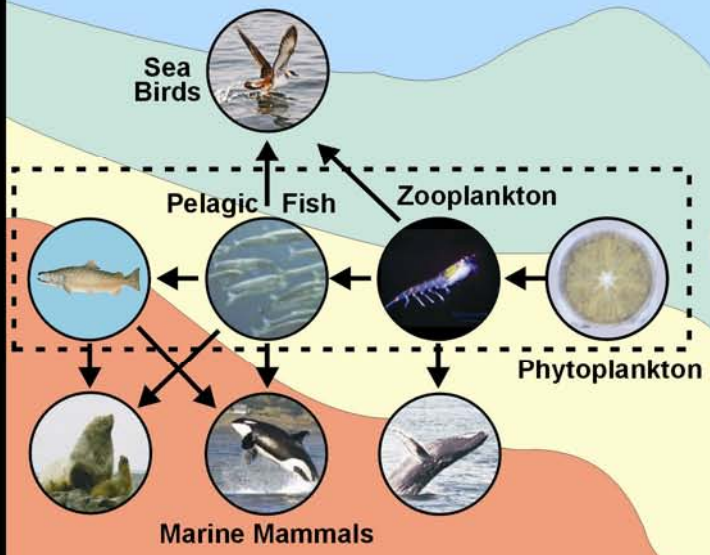
NaNOOS

United States

CenCOOS

SCCOOS

Draft



Harmful Algae Blooms



California Current



Marine Sanctuaries



Invasive Species



Commercial Fishing



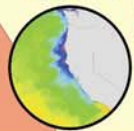
Sport fishing



Protected Species



Climate



El Niño

Mexico

Regional Associations

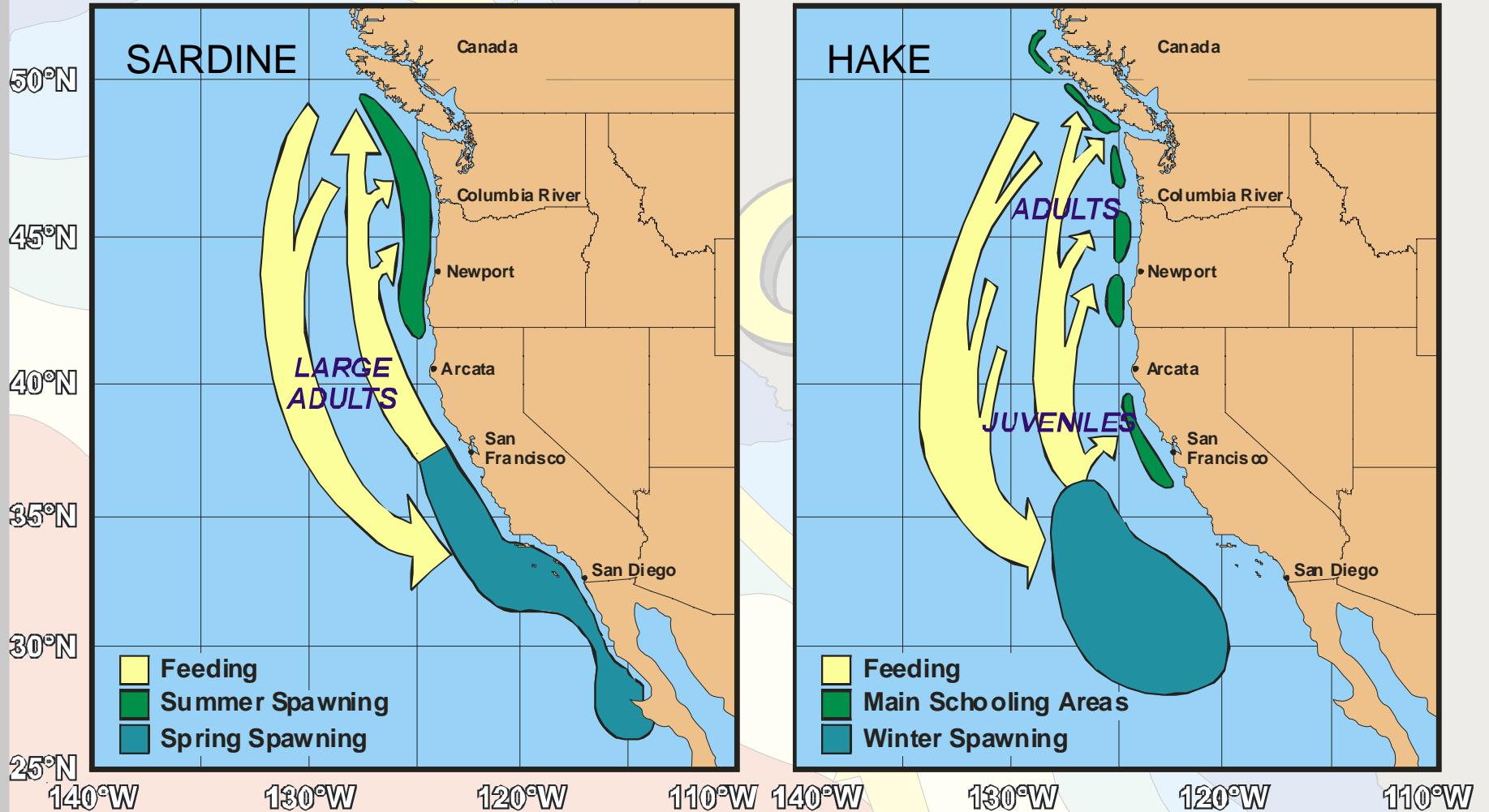
Government Partners

- NOAA Fisheries, NMFS
- NOAA Ocean Service, NOS
- NOAA Satellites, NESDIS
- NOAA Research, OAR
- California Department of Fish & Game
- Oregon Department of Fish & Wildlife
- Washington Department of Fish & Wildlife

Academic Partners

- NaNOOS
- CenCOOS
- SCCOOS
- University of California, SIO
- University of Washington
- California State University, HSU
- Oregon State University
- Monterey Bay Aquarium Research Institute
- PRBO Conservation Science

Transboundary Example: Coast-wide Fisheries





PaCOOS History

- Charter established (2003)
- 3 Annual Board of Governors Meetings (2003-2005)
- Science Plan (2005) (updated in 2006) & evolving
- NOAA's SWFSC Assistant Center Director to develop PaCOOS along the California Coast in collaboration with the NWFSC (2005)

PaCOOS Board of Governors

- 
- US Federal Govt Agencies
- US State Govt. Agencies
- Academic Members/NGO's
- Regional Association (Ex-officio)
- NANOOS
 - CENCOOS
 - SCCOOS
- International (Ex-officio)
- PICES
- *Canada-DFO (Invited to 2006 Board Meeting in January 2006)*
- *Mexico-Instituto Nacional de la Pesca (Invited)*

PaCOOS NOAA Products and Service Development for 2006

- Data Management
 - NOAA: CA Current-related data accessible using DMAC standards (NWFSC, SWFSC, NMSP).
 - RA's: Krill Data management with (modest) \$ (SCCOOS/CENCOOS)
- Ocean Observing
 - CalCOFI surveys for the 56th year (SIO/NOAA/CA F&G)
 - Coastwide ("BC to BC") ichthyoplankton survey
- Products
 - Model development on feasibility of CPS "forecast" (CPS)
 - Preliminary Integrated Ecosystem Assessment (NOAA).
 - Bill Peterson (NOAA) Coho Salmon Forecast for 2006 & 2007

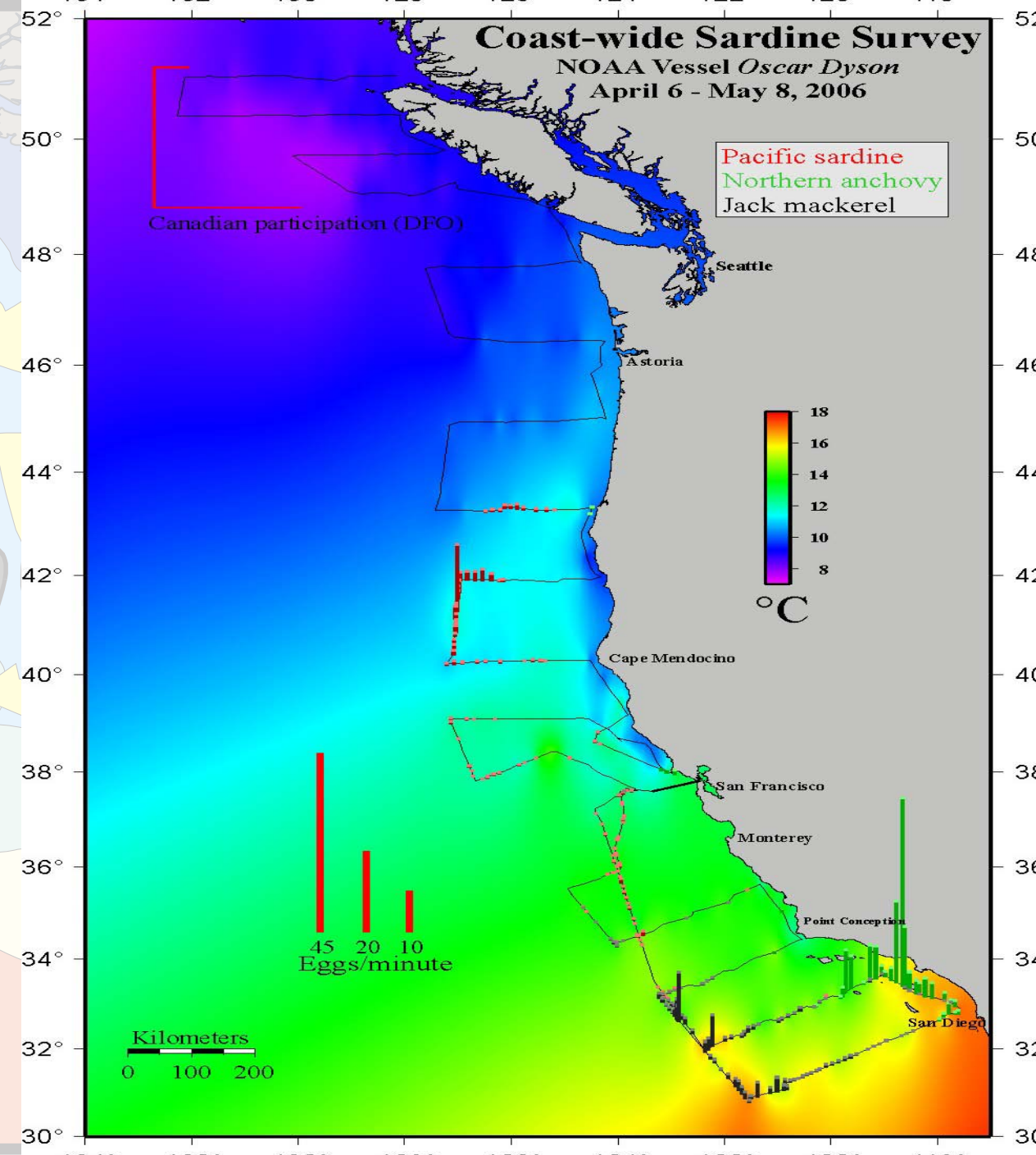
A map of the Pacific Northwest region, showing the coastline of Canada and the United States. The map is overlaid with several thick yellow arrows that form a circular path around the coast, suggesting a network or connection. The text is centered over the map.

PaCOOS ties with PICES:

PaCOOS

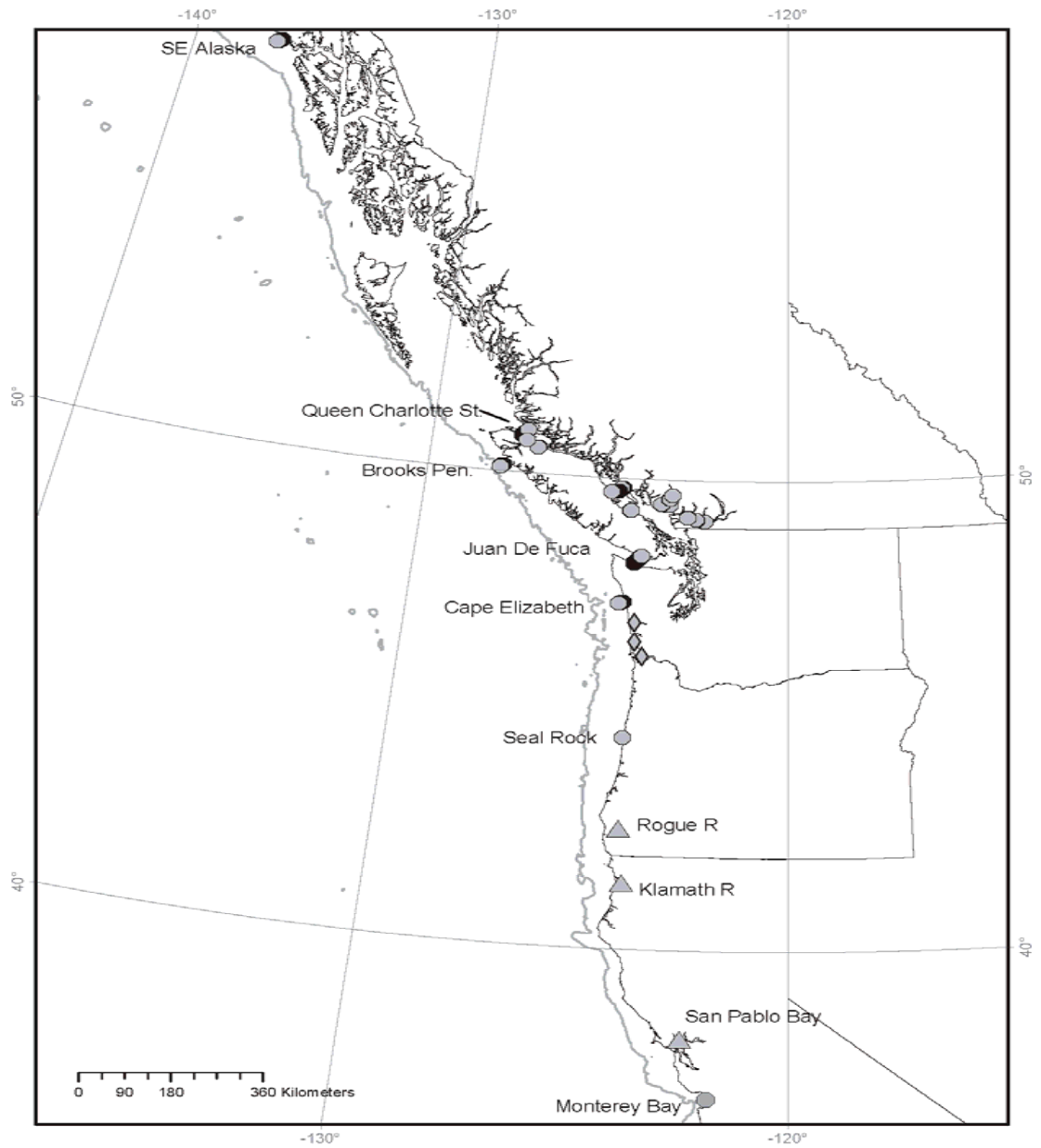
**Presently at the research level
between Canadian and US
Scientists**

Example 1)
2006 Coastwide
pelagic survey
NOAA-DFO



Example 2)
Green
Sturgeon
tagged in
the USA
and
recorded in
Canada

NOAA-
DFO

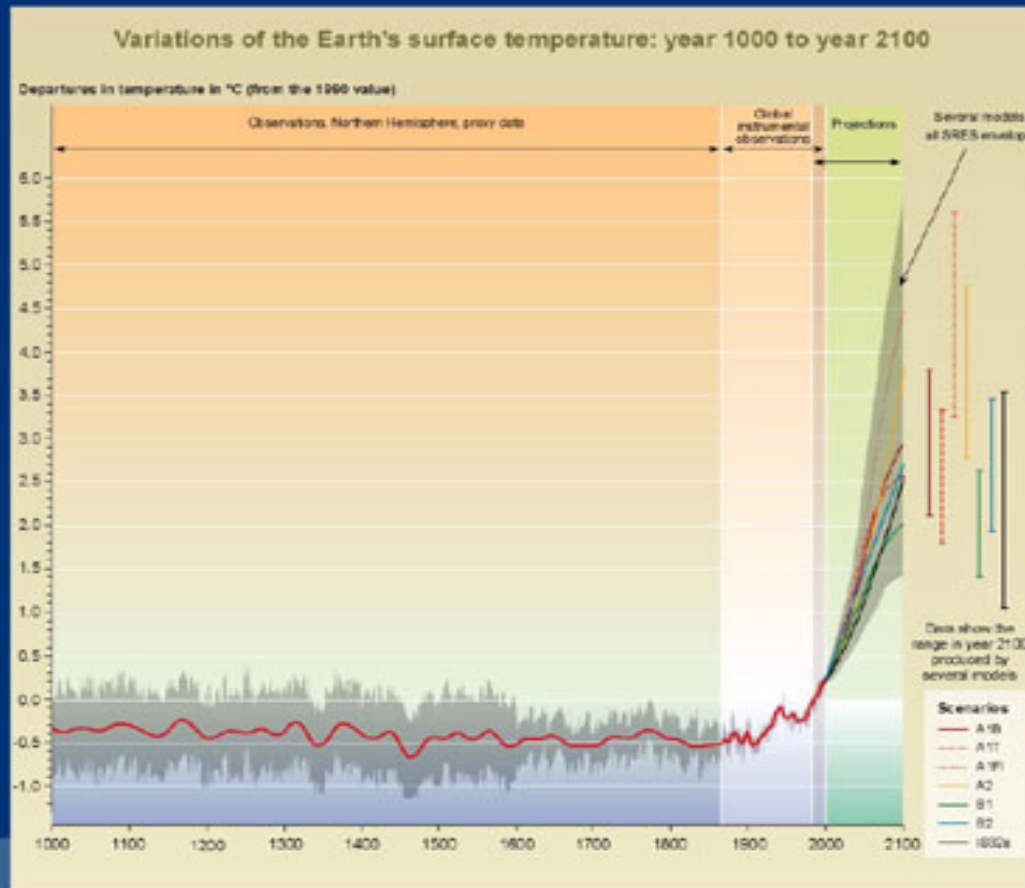


PaCOOS needs from PICES



- Support forecast concept development
 - Topic Session at PICES 2007 Annual Meeting
- Support forecast model development amongst PICES member countries.
 - Encourage multiple model development on same topic
- Support Data Collection and Management that are compatible with ocean observing standards.

Ecosystem Forecasts need to follow IPCC Procedures: Multiple models applied to the same problem



SYR - FIGURE 9-1b



PaCOOS can advise PICES on FUTURE Program

- “FUTURE willfocus() on understanding the mechanisms underlying ecosystem response, by developing a **forecasting capability**, and by providing estimates of the uncertainty associated with these forecasts.”

(PICES FISP Draft following Interim Science Board Meeting held in April 2006)



Thank you

PaCCOOS