

Fleet Improvement Committee

~ 2004 in Review and Plans for 2005 ~



UNOLS Annual Meeting

October 15, 2004

Fleet Renewal Activities

- Regional Class – SMR Prioritization
- Ocean Class – Phase II Study
- Global Class SMR Development
- Ocean Observatory Facility Needs
- Input to FOFC Update of Fleet Plan
- Update UNOLS Fleet Improvement Plan
- *Kilo Moana* Debriefs

Regional and Ocean Class

• Regional Class:

- Phase III SMR Prioritization – completed July 1, 2004
- Stay engaged in acquisition process (ongoing)
 - Provide feedback to NSF
 - Insure community input

• Ocean Class:

- Provided feedback in the Ocean Class Phase II study (complete)
- Poised to provide input

General Purpose Global Vessel SMR

Mid Life Refit considerations



2006 - *THOMPSON*

**FIC recommends the
model used for
developing the Ocean
& Regional Class
SMRs**



2011 - *REVELLE*



2012 - *ATLANTIS*

Global Class SMR Update

- Steering Committee Formed -Bruce Howe (UW),
Chair
- Task Items:
 - Review the past SMRs and other documentation to form the basis of the SMRs.
 - Develop mission scenarios.
 - Hold a Community workshop (if needed) to draft a set of requirements and desired capabilities.
 - Solicit input and feedback from the larger science and operator community throughout process
 - Produce SMR document.
 - As a follow-on activity incorporate Heavy Lift considerations, and Seismic Capabilities

Global SMRs – Initial Efforts:

- Identify new ship developments/technology
- Identify developments in other countries, oil patch, Navy, etc., that are relevant.
- A review of basic bounding parameters/rules of thumb (size, range, speed, fuel rate, DP tradeoffs, ROV use, manning, cost/day, etc)
- User scenarios will be important to get on the table sooner rather than later
- Get the community involved!

Website:

http://www.unols.org/committees/fic/global/global_smr.html

Need Project Timeline

Ocean Observatory Facility Needs

- Incorporated UNOLS working group recommendations into UNOLS Fleet utilization projections. Presented by Peter Wiebe to FOFC in April '04
- Initiated discussions with ORION office to determine their timeline.

Update Vessel Retirement Dates

This year the UNOLS Vessel Operators were polled:

- Should vessel retirement dates be extended? And if so:
 - Service Life Extension Program (SLEP) cost estimate for 5-year extension
 - SLEP cost estimate for 10-year extension
- How do the capabilities of their current ships compare to the Ocean Class and Regional Class SMRs?

Vessel Retirement Dates and SLEP Estimates

Eleven UNOLS ships >40 m have retirement dates prior to 2020 and are potential candidates for a SLEP (excluding ALPHA HELIX and EWING):

- Most of the ships (>40m) can have their lifetimes extended 5 and possibly 10 years for an estimated cost of \$1.025M-\$5M per ship for a 5-year life extension.
- Extension of retirement dates for most vessels <40m is not recommended.
- The immediate focus for ships with retirement dates past 2020 is on mid-life refit planning.

Revised Retirement Dates

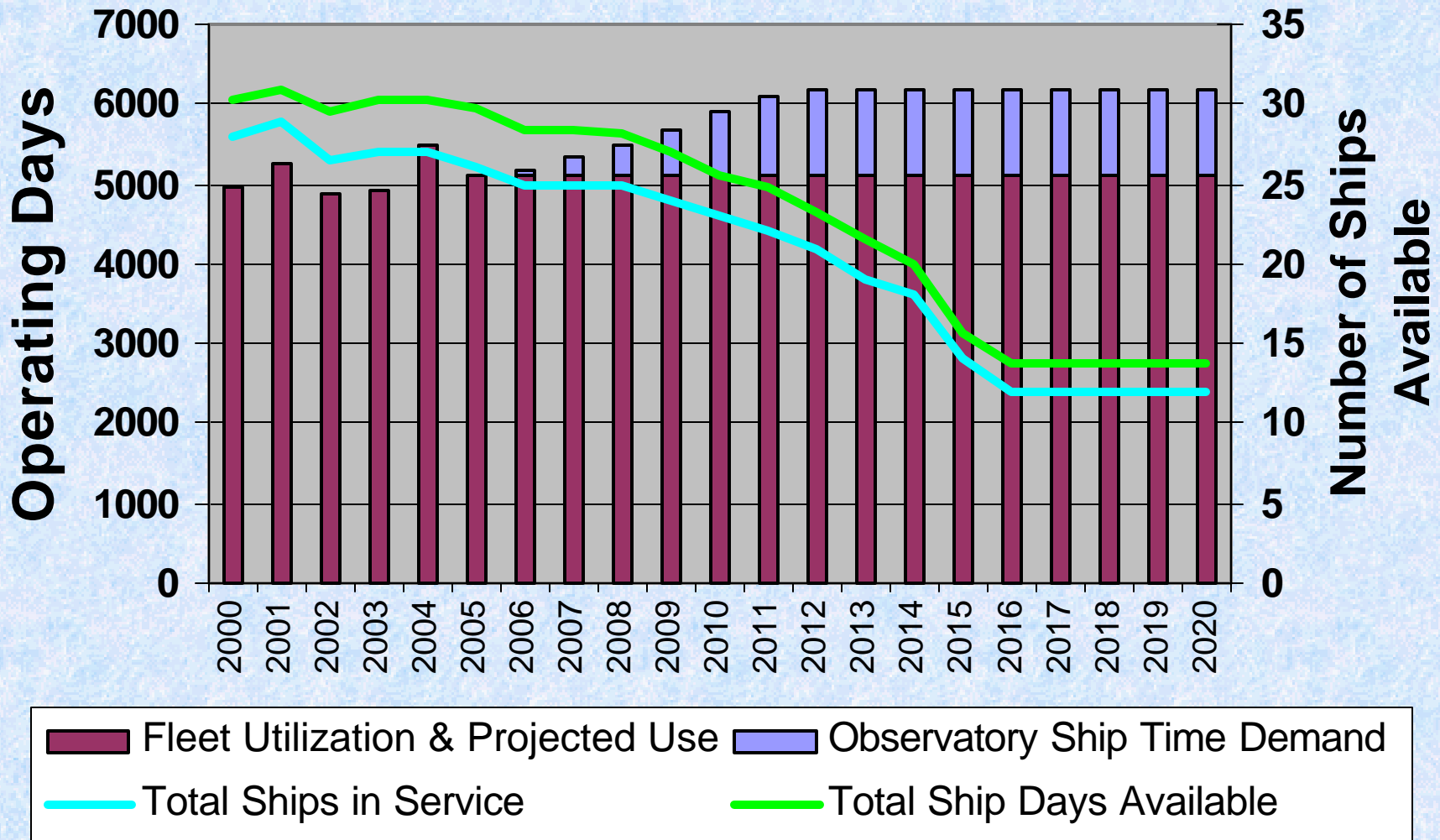
Preliminary Findings

- The SLEP estimates focus on maintaining the ship in an operational condition without enhancing the scientific capabilities of the platform.
 - The existing Intermediate Class vessels do not meet most of the desired Ocean Class SMRs
 - Regional Class ships fall short of the Regional Class SMRs in many areas.
- Maintaining the current UNOLS fleet vessels beyond their designed service life will significantly impede the advance of ocean science relative to that possible with new ships that meet the SMR specifications.

UNOLS Fleet Improvement Plan Outline

- Executive Summary / Intro
- Identify Future Science Initiatives:
 - Biological Oceanography
 - Chemical Oceanography
 - MG&G
 - Physical Oceanography
 - Education
 - Ocean Engineering
 - Cross cutting initiatives (Observatories (in a broad sense))
- Current Fleet Composition and Utilization Trends - Office
 - Current Fleet Description
 - Updated vessel retirement dates and SLEP costs
 - Fleet Trends
 - Geographical utilization

UNOLS Fleet Utilization and Projections (2000 - 2020)



* Only new construction with funds identified have been included in the total.

UNOLS Fleet Improvement Plan Outline

- Future Fleet Projections
 - UNOLS and FOFC Plan Fleet Projections
 - Ship Construction Plans and realistic timelines
 - Addition of other facility projections (Ocean observatory, etc)
 - Other Facilities – aircraft, deep submergence facilities
 - Scheduling and operating modes
 - Shortfalls:
 - Differences between FOFC and UNOLS FIP
 - Consequences of not carrying out SLEPs
 - Tradeoffs between various scenarios
 - Extensions and expansions beyond the FOFC Plan
 - Future Fleet Composition
- Fleet Budget Projections and Requirements
 - Ship Construction Cost
 - Future Fleet operating cost estimates
- Recommendations

FIP 2005 – Draft Timeline

- Finalize outline and assignments– 15 November
- Coordinate with FOFC - winter
- Draft text and prepare projections – 28 Feb 05
- First Draft – March Council Meeting
- Community review – April 1-30, 2005
- Second draft – Spring/Summer Council Meeting
- Circulate second draft for comment – Sept 1
- Final draft – September 30, 2005

KILO MOANA Debriefs

- Conducted Debrief Interviews starting in 2002
- FIC sent letter to UH identifying KILO MOANA issues requiring attention – April 2004.
- Obtain feedback from WESTERN FLYER and KILO MOANA Captains – ongoing
- Summary document of Debriefs
- Continue (focused and selective) debriefs

Other Items of Discussion

- **Ongoing Design and Construction Efforts -** Stay engaged in ARRIV, EWING replacement planning, and CHRIV
- **ADA Requirements**
- **FIC Membership** – Chris Measures completed his 2nd term. Jim Cochran appointed to committee.