



UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM



Outline - UNOLS Goals

- ★ **Broad, coordinated access to oceanographic research facilities:** Maintain a system that ensures broad access to research vessels and other facilities and provides for coordinated, efficient and effective scheduling of those research vessels and facilities.
- ★ **Continuous quality improvement:** Foster co-operation between facility operators, funding agencies and research scientists with the goal of continuously improving the quality and capability of existing ocean science facilities and the quality, reliability and safety of their operation.
- ★ **Plan for and foster support for the oceanographic facilities of the future:** Provide leadership and broad community input to the process of planning for and supporting the improvement, renewal and addition of facilities required to support the ocean sciences in the future.
- ★ **Security - new topic**



Scheduling and Access

- ★ The ship scheduling committee will work with PI's and Agency program managers to identify scheduling issues and funding decisions as early as possible in an effort to solidify schedules by mid September, 2002 for CY 2003 operations
- ★ Every attempt will be made to meet the scientific objectives of all funded projects when creating schedules while at the same time minimizing the costs associated with dead-head transits and unproductive idle time.
- ★ Idle periods will be utilized for maintenance and upgrade opportunities whenever possible.



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Scheduling and Access

- ★ The UNOLS office will work with the Federal Agencies, PI's and ship schedulers to improve the systems that support ship-time requests and scheduling.
- ★ The UNOLS Office will work with Federal Agencies to generate clear explanations to PIs of schedule compromises that may become necessary.



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Quality of Service - various

- ★ Update the Post Cruise Assessment process and forms to yield clear feedback and measures of improvement. (formed working group).
- ★ RVTEC to develop standards of service - what's "basic"
- ★ Improve training and preparation for safe and secure operation of research vessels



Quality of Service -ISM

- ★ Class I ship compliance required by July, 2002
- ★ Create procedures that continue to enable flexible science operations within the constraints of ISM regulations.
- ★ Ensure that scientists are aware of any new procedures and requirements.
- ★ Work to clarify and promulgate safety-related responsibilities of scientific party members.
- ★ Develop plans for voluntary compliance or other enhancement of R/V safety standards for smaller vessels.



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Quality of Service -Icebreakers

AICC will shift focus to science operations and outfitting of all USCG operated Arctic Icebreakers.



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New and Renewed Facilities

- ★ Stay engaged with the FOFC "Fleet Plan" process.
- ★ Promote the budgeting of ship design and construction funds.
- ★ Begin work on updating SMRs for Oceans, Regional and Global Class vessels.
- ★ Promote concept design development for new vessels.
- ★ Assess impacts of Ocean Observatories and other new uses of ships on ship requirements and designs, and on fleet size, use, scheduling



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New and Renewed Facilities

- ★ Develop Science Mission Requirements and specifications for oceanographic wires, cables and ropes for the future.
- ★ Provide community input on the development of new submersible assets and instrumentation.
- ★ Improve shipboard scientific equipment utilizing group purchases and standard specifications to increase cost savings.



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FLEET RENEWAL

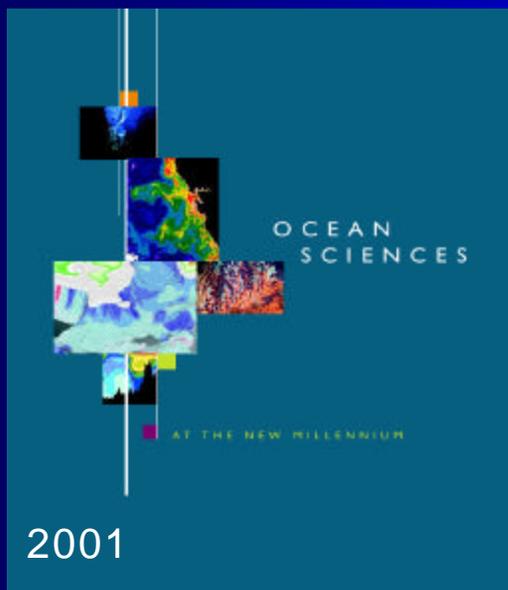
- ★ Several ships getting old, especially Class III-V
- ★ Scientific requirements changing, increasing
- ★ Long lead times for federal budget, design, build -
AGORs: 1983 (science rqmts.) -1997 (*Atlantis* in service)



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“The federal agencies funding research in oceanography should prepare and maintain a **long range plan for the modernization and composition of the oceanographic research fleet which reaches well into the 21st century**. This will avoid the high cost of obsolescent facilities and provide the Congress with a unified roadmap for out-year allocations for vessels to support oceanographic research.”



“Maintaining a modern, well-equipped research fleet is **the most basic requirement for a healthy and vigorous research program** in the ocean sciences.”



FLEET RENEWAL - SCIENCE DRIVERS

- ★ Cowles/Atkinson NSF-supported workshop at OSU, summer 2000: revolution in observing methods (floats, AUVs, ...) implies *increasing* need for ships:
 - * Global obs. suggest new research questions
 - * Human/lab style shipboard analyses needed for variables not measurable in unattended mode
 - * Targeted process experiments set in or suggested by global obs. context - including fast-response studies (ready reserve capacity)
 - * Deploy/service parts of ongoing obs. systems
 - * Past trends suggest 1 ship/decade increase



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- ★ Federal Oceanographic Facilities Committee (FOFC) - interagency group reporting to ORAP/NORLC. UNOLS is non-voting participant.
- ★ Late 2000 - Initial draft plan
- ★ Early 2001 - extensive UNOLS/community review and comment - open, on UNOLS web.
- ★ Considerable UNOLS/FOFC agreement
- ★ Main difference - degree of fleet strengthening projected and advocated
- ★ Next draft (cover at right) now ready for FOFC approval, then to NORLC

Charting the Future for the National Academic Research Fleet



A Long-Range Plan for Renewal

Draft Plan
October 2001



SECURITY - PIRACY

- ★ Attacks in 2000 up 57% (1999); 450% (1991)
- ★ 469 attacks, 307 boardings, 8 hijacks, in port/at sea
- ★ 72 sailors killed, 24 injured
- ★ Hot spots in Indonesia, Bangladesh, India, Straits of Malacca, Ecuador, Red Sea
- ★ Objectives - cargo and/or ransom
- ★ International Maritime Bureau - Piracy Reporting Center in Kuala Lumpur:
http://www.iccwbo.org/ccs/menu_imb_piracy.asp



Attacks in South America 1 January to 31 December 2000





PIRACY AND UNOLS

- ★ Red Sea Outflow Experiment (REDSOX)
- ★ REDSOX I: Feb.- Mar. 2001 - R/V *Knorr* - security professionals aboard
- ★ REDSOX II: Aug.-Sept. 2001 - R/V *Ewing* - security training on prior leg
- ★ Gulf of Aden. Work near shore (outside 12 n. mi.) driven by scientific objectives



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- ★ REDSOX II, August 31: R/V *Ewing* attacked approx. 18 n. mi. off Somalia in western Gulf of Aden
- ★ Small boat deployed from larger vessel
- ★ Small arms, grenade launcher used



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- ★ Personnel into staterooms, other defensive steps taken, scientific work stopped, ship headed to open sea asap, etc.
- ★ No injuries or damage
- ★ Origin/objectives of attackers not known
- ★ Subsequent scientific program modified/reduced



ISSUES FOR THE FUTURE

- ★ Assessment of risks for planned programs/areas.
 - * Decisions to relocate or not to do some programs?
 - * Basis for such decisions?
- ★ Increments of preparedness, watchfulness
 - * Training for crew/scientists?
 - * In-port and at-sea vigilance steps?
 - * Persons/materiel arriving and leaving; stowaways?
 - * Intelligence *re* threats?
 - * Additional security personnel?
 - * Arms, other devices?



- ★ Responses to impending or actual attacks
 - * Shipboard defensive steps
 - * Avoidance
 - * Law enforcement or military assistance, communication

- ★ Ordinary piracy vs. terrorism after Sept. 11
 - * R/Vs - minor targets? But also accessible?
 - * UNOLS vessels are American-flag
 - * Similar in-port and at-sea concerns and preparations?
 - * Obtaining appropriate intelligence/threat assessment for both?



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NSF Draft Advice to proposers:

- * “Cruises should be planned to avoid regions (war risk exclusion zones) for which research vessels are not automatically insured through their existing global coverage insurance policies.”
- * “NSF will not support cruises in areas where war risk insurance is unavailable, or is available at excessive premiums.”



War Risk Exclusion Zones

- * Defined and set in common by marine insurers (London group)
- * Change from time to time to reflect new circumstances
- * Sept. 11 = insurance industry disaster = future caution, high premiums, exclusions



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War Risk Exclusion Zones - UC Example

“...waters of the world between 60N and 60S...but excluding waters of the following areas or countries:

Persian or Arabian Gulf and adjacent waters including the Gulf of Oman north of 24N

Angola (including Cabinda)

Israel, Lebanon, Syria, Eritrea, Gulf of Aqaba, Somalia

Libya, including Gulf of Sidra

Albania, Zaire, Liberia, Abkhazia, Sri Lanka, Yemen