

- 1) Select reductions that do least harm to science.
- 2) Balance reductions in ship use with reductions in research program funding so as to retain parity between the success rates of seagoing and non-seagoing proposals.
- 3) Regard the assessment of damage as independent of which agency will pay for a layup of ship X.
- 4) Premature to consider disposals of global class vessels, because there are no plans in place for any replacements of these ships and they are needed for observatories in addition to normal work.
- 5) With prospect of new construction, a revolving scheme of requiring retirement of an old ship in advance of new ship can yield many years of net fleet census/cost reduction, if needed.
- 6) Current prospects may exist for increased use of UNOLS ships in 2006 by agencies other than NSF, i.e. NOAA and Navy and allivate the problem.
- 7) Fleet and facility renewal efforts at NSF/OCE (apart from the ARRV in the MREFC account) have hitherto been cast as contingent on some reasonable overall growth in the OCE budget. What happens to plans with no growth.
- 8) Use time bought by solutions that emphasize layups to work hard on the central problem of improving the NSF budget so as to relieve the layup pressure in later years.

- 1) Agreed with Kennel/Knox comments.
- 2) Concern expressed about the lack of funding for seagoing research and worry that the NSF could slip into the role of losing the balance between basic funding and marine operations.
- 3) The right balance must be struck between lay-offs and new construction.
- 4) An ocean observatories program cannot begin without the required marine facilities support.
- 5) It is crucial to get other federal agencies involved.

- 1) No consensus here about the short-term response to the budget issues.
- 2) Recognized the need to lay-up at least one ship, perhaps two - Knorr and Melville were the two names mentioned most frequently.
- 3) Concern that the financial and personnel underpinnings of the observatory initiative are still weak, and the tradeoffs/payoffs between 'core' science and 'observatory' science have not been adequately discussed and explored.
- 4) Management of the UNOLS fleet: significant financial savings might result if regional consortia managed several vessels each i.e. perhaps 5 regional centers (NE, SE, Gulf, SW, NW - or some other distribution) that manage all the marine vessels in the fleet.
- 5) Although new and exciting scientific pursuits and research areas exist, missing is an articulation of the ways in which inadequate (or oversubscribed) facilities define the boundaries of the new science that will be conducted for the next 20-30 years.
- 6) Current model assumes some balance of \$\$ for marine science research from NSF, NOAA, ONR and NASA. Is this still a functional model? Should NSF have the sole budgetary responsibility for the UNOLS fleet? Is there another source (NOPP) that could fill the void?

- 1) Enhance Long-Term User Base through Agency Coordination: continue to promote cross-agency cooperation in fleet operations – primarily with NOAA, but also with other agencies like EPA and USCG.
- 2) Fleet size should be based on funding realities. UNOLS should take the lead in recommending a realistic future fleet size based on the number of vessels the system can support.
- 3) Historically underutilized vessels should be permanently removed from the UNOLS fleet first.
- 4) Vessels which are approaching obsolescence, have marginal maintenance records, and/or have less science support capability, should be removed in favor of supporting their more modern and efficient counter-parts as they come on line.
- 5) Keep regional vessels below regulatory thresholds (300 GRT/500 ITC) as a realistic, legitimate method to restrict size – and thus operating cost.
- 6) The replacement cost for new vessels should be a funding partnership with the operating institution – particularly for the Regional vessels.
- 7) UNOLS should investigate methods to reduce operating costs on the larger vessels. Manning reductions may be possible through automation and implementation of a two-watch system as is done in other countries.

- 1) Significant reductions in the overall operating costs within the UNOLS fleet appear imminent. Fuel and crew represent major portion of cost.
- 2) It may be beneficial to organize a very detailed, fleet-wide study of all the different aspect of how vessel's acquire their fuel and then focus on ways to reduce the associated costs. Bulk purchase?
- 3) To reduce crew size costs, consider the option of building additional regional class vessels and reduce the number of global class ships.

- Once an agency affects the flow of cruises by maneuvering schedules during the regular scheduling process in such a way as to accommodate a “ pending” request (because of seasonal or location considerations) which has repercussions for other funded cruises, or leaves a ship stranded away from home port without possibility of picking up work, if they withdraw their pending request, then should there be a cancellation penalty? It can be argued that if some penalty is not assessed then other funding agencies are left with the burden of subsidizing the offending agency because of the need to re-distribute transit costs and absorb elevated daily ships rates.

- 1) Find a plan that best serves the science needs of the community for ship-based research.
- 2) Take a longer view than just 2006 - don't make short term decisions.
- 3) Look at BOTH reducing costs and increasing revenue.
- 4) In the short term, ship layups should be preferred over early ship retirements.
- 5) If ship layups do occur, then "share the pain" - i.e. some sort of rotating layup scenario.

Establish an ad hoc committee to develop recommendations to NSF in response to this request. The committee should include reps from at least all of the global and intermediate ship operators (SIO, OSU, UW, UH, URI, WHOI, LDEO, HBI), and possibly 2-3 reps from local/regional operators.