

Global SMR Committee Phone/Web Conference
January 28, 2005
Meeting Summary Report

Meeting Participants:

Bruce Howe (UW), Chair
Tom Althouse (SIO)
Jim Broda (WHOI)
Annette DeSilva (UNOLS)
Bob Embley (OSU)
Dave Hebert (URI), FIC Chair
Paul Ljunggren (LDEO)
Mike Prince (UNOLS)
Dan Schwartz (UW)
Al Suchy (WHOI)
Woody Sutherland (SIO)
Randy Watts (URI)
Pat Wheeler (OSU)

Welcome and Introductions – A phone/web conference of the Global Class Science Mission Requirements (SMR) Committee was held on January 28, 2005. Bruce Howe, Chair, called the meeting to order at 1300 EST. A motion to accept the meeting minutes of December 13, 2004

<http://www.unols.org/committees/fic/global/global_mtg121304_draft.PDF> was made and approved.

The agenda for this meeting included the following items:

- (1) Review Task Items from December 13 meeting
- (2) Refine Task Assignment List
- (3) Review Project Timeline
- (4) Discussion on how to engage the broad community (web postings, public forums, etc.)

Review Task Items and Assignments – The task items from December 13, 2004 were reviewed and refined. The task items were presented as slides and are available as Appendix I and at <http://www.unols.org/committees/fic/global/tasklist_012805.PDF>. The slides reflect updates to the task descriptions, assignments, and due dates as discussed during this meeting. The notes below summarize the discussion on the task items.

Refine Mission Statement: The draft mission statement is included in Appendix II. The committee agreed that the statement provides a good first draft, but it shouldn't be finalized until the SMRs are complete. The mission statement might need to be revised based on the outcome of this SMR update effort. Mike Prince commented that the Regional and Ocean Class mission statements were drafted after the SMRs had been

developed. It was recommended that the task of drafting a mission statement should be deferred until the end of the project.

Tom Althouse commented that if the mission requirements indicate a vessel larger than that indicated by the FOFC plan, it is incumbent upon this committee to state this. Bob Embley questioned what would happen if the Global Class as defined by the SMRs call for various size ships, instead of one design for the whole Class. This could be the case.

Terms of Reference – Bruce Howe asked the Committee if they endorse the terms of reference as drafted in Appendix II. Tom Althouse recommended that the Global Class SMR document should follow a standard format. Text was added to the Terms of Reference to indicate that the Global SMR document should be consistent with the Regional and Ocean Class SMR format. The updated terms of reference are posted on the project web page at:

<http://www.unols.org/committees/fic/global/global_smr.html#task>.

Mike Prince remarked that the funding situation is very grim and agency support for a community workshop is not promising. The committee should consider ways to carry out this effort without the input provided by a workshop.

Compare the Ocean Class and Global SMRs – It was decided that each committee member should review the Ocean Class and 1989 Global SMR documents to determine the requirements and capabilities that might be applicable for the Global SMR document. Mike Prince highly recommended that the entire Ocean Class document be reviewed. Tom Althouse offered to provide the UNOLS Office with a table that includes both the Ocean and Global SMRs. This could be useful for comparison purposes. Mike Prince will review Tom's table and provide any additional requirements as needed. He will then distribute the revised table to the Committee for review. The Word documents for the Ocean Class and Global Class SMRs can be downloaded from the UNOLS SMR web page at:

- Ocean Class SMR:
<http://www.unols.org/committees/fic/smr/ocean/ocsmr_version1.doc>.
- Global Class SMR: Large High-endurance, General-purpose Oceanographic Research Ship (1989):
<<http://www.unols.org/committees/fic/smr/lgsdra.doc>>.

The next Web/phone meeting was planned for March 8th. The Committee was asked to provide their comments regarding the Ocean Class and Global Class SMR documents by 28 February to the UNOLS Office.

Community Survey – Mike Prince will revise the workshop survey used for the Ocean and Regional Class SMR projects. He will provide a draft for the next meeting.

Compare the current Global Ship capabilities to the '89 Global SMRs and the Ocean Class SMRs – This tasking was assigned to the large ship operators (Paul, Tom, Dan and Al). Annette will gather the input provided last year for the retirement date/SLEP survey

and send it to the operators. That survey compared the large ship capabilities to some of the Ocean Class SMRs.

Evaluate construction projects underway in other countries - Tom Althouse is working on this task and will provide input on the GOSars vessel. He will also contact Matt Hawkins regarding the NERC vessel.

Identify modification that have been made to the current Global Vessels – The large ship operators will provide the modification lists to the UNOLS Office for compilation.

ORION Requirements – Rick Jahnke has replaced Ken Brink as the new ORION Director. Dave Hebert will contact The ORION Office to keep abreast of their plans.

Review past workshop recommendations – It was recommended that this action be deferred until later, however, it was noted that the community survey should consider the recommendations. For the time being, the committee was asked to think of any workshops or reports that should be reviewed. The reports/studies below have been identified:

- Ocean Drilling
- NSF Futures documents
- Cowles/Atkinson Report
- Ocean Observatory Reports
- NRC Report on Deep Submersible Requirements
- Seismic Needs

Committee members were asked to provide suggestions to Annette so that a bibliography could be assembled and posted on the project web page.

Review AICC and ARVOC requirements for HEALY and PALMER – Mike Prince will investigate.

Investigate new technologies – Dan Schwartz will explore MTS and do a literature search.

Identify impacts of new and emerging regulatory requirements - Large ship operators will address this. Tom Althouse commented that new vessel security requirements would need to be addressed. As an example there are new requirements that may call for a way to isolate the bridge. This would need to be incorporated into new ship designs.

New Agency Requirements – The agencies may have new requirements, as we learned recently during the Ocean Class study. The UNOLS Office will contact the agencies to determine if they have any new requirements.

Large ship utilization – Annette DeSilva will compile utilization statistics for the large ships showing trends, research disciplines, areas of operation, etc. It was also recommended that large ship demand (ship time requests) statistics be compiled.

New tasks – No new tasks were identified.

Project Timeline – Items due by the next meeting were identified and are listed in the Task summary table below.

Bruce explained that given the current fiscal climate, it is unlikely that a community workshop would be supported. The committee will need to rely on the community web survey for input. The timing for the survey was discussed and the following timeline was recommended:

- Post Survey for community input - mid April
- Deadline for community response - End of May/early June

Community Input Strategies:

The committee discussed strategies for obtaining community input for the web survey. These included:

- Focus distribution of the survey with individual messages.
- Encourage all institutions to respond.
- Poll chief scientists.
- In addition to the traditional NSF and ONR supported ship users, contact ship users with support from other agencies: NOAA, MMS, NAVO, NASA, NOPP, USGS, etc.
- Advertise the survey in the CORE newsletter.
- Advertise in ARCUS news.
- Write a brief article for EOS.
- UNOLS Newsletter

Summary of Updated Task List (updated as of 2/7/05):

Task	Assignment/Due Date/Status
Refine Mission Statement	Defer to project end
Draft Terms of Reference for the Global SMR Committee	Complete
Review the Ocean Class and 1989 Global Class SMRs to determine what should be included in the SMR document. SMR Word documents are available on the UNOLS website. Tom Althouse will provide SMR comparison table Office. Mike Prince will amend and provide to the committee.	T. Althouse will provide a SMR Comparison table to office – completed 1/31. M. Prince will refine and redistribute to committee for input. Committee input – due 2/28.
Draft Community Survey – Mike Prince will draft by 3/8. Post for Community input – mid April. Deadline for Response – end May/early June.	First Draft – Mike Prince – due 3/8.
Compare current Global Class vessel capabilities with the Ocean Class and 1989 SMRs to determine how well	Large Ship operators (Tom Althouse, Al Suchy, Dan

the SMRs describe current and future science requirements.	Schwartz, and Paul Ljunggren.
Evaluate construction projects under development in other countries (UK ship, GOSars vessel). Contact Matt Hawkins (U.Delaware) for the NERC ship project.	Tom Althouse
Identify modifications that have been made to the current Global Vessels BROWN, ATLANTIS, REVELLE, THOMPSON) since they entered service.	Large Ship Operators
ORION Requirements – keep in touch with Rick Jahnke	Dave Hebert
Review past workshop recommendations (ocean drilling, NSF Futures documents, Cowles/Atkinson report, etc). Immediate task is to compile list of workshops, reports and studies.	Committee – provide suggestions to Annette. Annette will compile bibliography – 3/8/05
Review AICC/ARVOC requirements for HEALY and PALMER	Mike Prince
Investigate technology developments in new commercial ship construction	Dan Schwartz
Identify impacts of new and emerging regulatory requirements (ICES Noise standards, ADA, Marine Mammal and Acoustic Permitting, USCG Inspected, SOLAS ships, HAZMAT, International Requirements, Double Hulls, Ice Capable classifications, Etc.	Large Ship Operators
Contact major funding agencies to determine if they have new science requirements.	UNOLS Office
Compile large ship utilization trends and ship demand.	UNOLS Office

Next Meeting – The next phone/web meeting was scheduled for March 8, 2005 at 1:00 pm EST.

The meeting adjourned.

APPENDIX I

Slides: Meeting Agenda and Task Items:

<http://www.unols.org/committees/fic/global/tasklist_012805.PDF>

DRAFT – 01/27/05

Global Class Science Mission Requirements Steering Committee

In the next five to ten years, several of the present Global Class ships will reach the age when mid-life refits normally are required. The Science Mission Requirements (SMRs) for this class of vessels were originally drafted in 1989. Since that time, there have been several advances in oceanographic research as well as technology developments, and emerging new missions that affect the desired capabilities for these vessels. One example of an emerging mission capability, not foreseen in 1989, is meeting the needs of the future ocean observatory programs. Additionally, SMRs will need to address regulatory constraints that have been implemented in recent years. Thus, the UNOLS Fleet Improvement Committee (FIC) has formed a steering committee to update the Global Class SMRs. The first Global ship due for a mid-life refit is the R/V *Thomas G. Thompson*, which will have completed fifteen years of service in 2006. Additionally, the Lamont-Dougherty Earth Observatory (LDEO) is preparing to place into commission a new Global Class research vessel which replaces the R/V *Maurice Ewing*. Therefore, reviewing and revising the 1989 Global Class SMRs is an exercise whose time has arrived.

Over the past couple of years, UNOLS has drafted Science Mission Requirements (SMRs) for two new classes of vessels that were outlined in the Federal Oceanographic Facilities Committee (FOFC) report, "A long-Range Plan for Renewal." These SMRs were for Regional Class and Ocean Class vessels. The final documents are posted on the UNOLS website at <<http://www.unols.org/committees/fic/smr/index.html>>. The FIC has recommended that the model used to develop the Regional and Ocean Classes SMRs be followed for the Global SMR effort. Additionally, the format of the Ocean Class SMR document should be used as a template in drafting the Global SMRs.

The Global Class SMR Steering Committee has been established by FIC to develop and submit revised Science Mission Requirements for review by the community and approval by UNOLS FIC and Council with a nominal target completion date of late 2005. Membership consists of a range of science disciplines, institutions, and includes vessel-operator representatives.

The Global Class SMR Steering Committee should draft a set of requirements that address the Global Class ships as specified by the FOFC plan (Length: 70-90 m; Endurance: 50 days; Range: 25,000 km; Berths 30-35) and other science needs as expressed by the oceanographic community. The goal would be to produce an SMR document similar to the Ocean and Regional Class SMRs and include additional requirements that have arisen since those documents were produced (e.g. ADA, Hazmat, ISM, and homeland security). The SMRs should be developed for general-purpose requirements applicable to all Global Class research vessels. The committee should also consider additional requirements for a seismic capable ship, an observatory support (heavy lift) vessel and a human occupied vessel (new HOV) support ship as additional

appendices to their report. All SMR documents are working documents and will be updated on a regular basis as needed.

Task items for the Global Class SMR Steering Committee include the following:

- Establish a project timeline.
- Review the past SMRs and other documentation to form the basis of the new/revised SMRs.
- Use recent experience and comments to define methods for getting broad community input including a survey of the community for future ship needs.
- Identify any workshop/meeting/internet conferencing needs and essential participants, eventually including Naval architect input. Funding will be requested, as appropriate, through the UNOLS Office.
- Develop mission scenarios.
- Draft a set of requirements and desired capabilities. Wherever possible, requirements involving numerical data points should be expressed in ranges rather than discrete values.
- Update progress through UNOLS website. Post the draft SMR document on site.
- Solicit input and feedback from the larger science and operator community
- Produce a SMR document for review and approval by UNOLS.
- As a follow-on activity incorporate Heavy Lift considerations, and Seismic Capabilities into appendices, as noted above.

Orig. D. Hebert, 12/13/04

Rev. J.M. Prince, 1/27/05

Rev. D.S. Schwartz, 1/27/05.