

UNOLS White Paper
Proposing, Planning and Executing Logistics Involved in Oceanographic
Field Operations in Foreign Waters and Ports

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1. Motivation

To be successful and productive, oceanographic field studies require excellent coordination between scientists, ship and facility operators and funding agency representatives. Oceanographic data collection is expensive and in most cases public funds are being used to support the science and operations, hence it is crucial for everyone to be as safe, efficient, and cost-effective as possible. It is also a reality that the 21st century's dynamic, global, geopolitical environment has created challenges and opportunities to working in foreign waters to conduct oceanographic research. These realities, and recent experiences where complex logistics and marine science research (MSR) clearances hampered oceanographic cruises, have brought to light the need for a renewed effort by scientists and operators within the U.S. Academic Research Fleet (ARF) to work together to ensure that Federally funded field research is well coordinated and successful.

After several meetings and teleconferences in early 2017 among a diverse group of oceanographic scientists, UNOLS ship operators and Federal agency program managers- the working group members cited above - accepted the task of reviewing a range of topics that relate to the planning and execution of oceanographic field research. The primary focus of the deliberations pertained to work in international waters, where ships enter and return to foreign ports, as well as work involving field studies within the Exclusive Economic Zones (EEZs) of foreign nations, and the requisite planning, logistics and permitting involved with those efforts. This included polling and discussions with many U.S. ARF operators involved with supporting field work in foreign and international waters throughout the world's oceans to better understand the protocols, best-practices and communications methods each operating institution employed in their work to support scientists using their ships and facilities.



What is presented here is an executive summary of those discussions and a set of recommendations that can help guide scientists, agency program managers and academic vessel operators in their varied collaborative functions to carry out productive oceanographic research in the 21st century. Appendix 1 to this White Paper has also been compiled and provides more detailed, specific information on some of the key topics the committee discussed.

2. *Executive Summary/Recommendations*

- 2.1 One clear outcome identifies the need for all academic research vessel operators to compare their approaches to cruise planning, and to aim at a more consistent ARF-wide consensus regarding the timing and communication protocols for cruise planning. Revised protocols should allow ship operators to better coordinate with scientists the myriad details involved in conducting oceanographic field work in foreign waters (see Appendix 1 for details).
- 2.2 By the same measure, scientists need to be directly involved in the details of cruise planning and logistics with ship operators, especially when working within EEZs of foreign nations, and when shipping scientific equipment into/out of foreign ports. Communication is a bi-directional process where vessel operators and scientists must be engaged to take care of the many details required for oceanographic field research to be properly carried out. The combined efforts of this renewed and improved collaborative process will help ensure successful and cost-effective research programs in the future.
- 2.3. Academic vessel operators should strive to have a single point of contact with scientists so that communications and action items are clearly established and successfully resolved.
- 2.4. Normal facility costs involved in executing the sea-going science program (e.g., port costs, crane charges to load/unload equipment, clearance fees related to embarking and disembarking science personnel), should be broadly consistent throughout the ARF. These routine costs should be clearly delineated and negotiated between academic research vessel operators and Federal funding agencies, and to the extent possible, covered under their annual operating costs. This will simplify and regularize the science budgeting process so that scientists do not get large discrepancies in expected routine costs from different operators.
- 2.5 Scientific Principal Investigators (PIs) and Chief Scientists have the responsibility to familiarize themselves with obtaining necessary visas and permitting to do research and collect samples within foreign EEZs. Proactive visa and permit applications are critical as many countries have tightened their requirements. Ultimately it is the scientists' responsibility to identify all types of permitting required and the type(s) of visa that shipboard scientists must have to accomplish



the stated research goals. This information should be required in the proposal project description so that reviewers, panel members and program officers can properly assess the likelihood of success in gaining the necessary authorizations to conduct the proposed research.

2.6 Shipping of science equipment to/from foreign ports is critical for conducting successful research cruises. Science PIs and Chief Scientists should ensure that they have followed well-established protocols for all of their shipments, and that different science groups using the vessel for a cruise have coordinated their shipments with the ship's operator. Proper planning of the timing of arrival of foreign shipments meeting the vessel is crucial to avoiding delays. Information on complex shipping logistics that pertain to specific countries should be shared among operators and scientists. This type of information could be compiled by UNOLS and made available through its website.

Engaging with reputable U.S. freight forwarders and foreign corresponding agents is essential to ensure proper handling of the equipment and necessary customs and freight-forwarding documentation. Facility operators routinely have this information and should share it with prospective science users during the cruise planning process. Further, commerce liaisons at many U.S. embassies commonly maintain lists of reputable freight forwarders and shipping agents with local experience and will share this information with science parties and operators upon request.

Additional information about this aspect of cruise planning and coordination is provided in Appendix 1. It is strongly recommended that the reader refer to Appendix 1 for important details.

2.7 We recommend that UNOLS take the lead in compiling a periodically updated best practices document pertaining to organizing and executing shipments of science equipment for oceanographic cruises that can serve both PIs and vessel operators (Appendix 1 provides an outline and initial draft of that document). As part of the process to compile this type of information, UNOLS should consider coordinating a ARF-wide discussion about U.S. freight forwarders and foreign agents for countries that are commonly visited by vessels in the ARF, and compile information around work in foreign ports from the Post-Cruise Assessment Reports (PCAR) and regularly held panels and working groups that have scientific and technical personnel as members.

