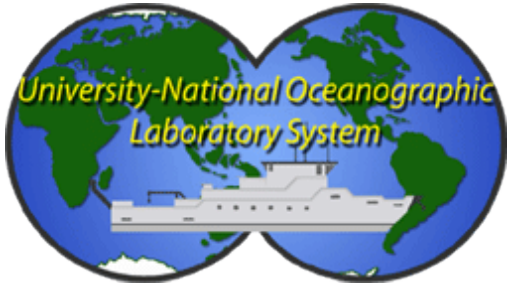


UNOLS 2013
Mid-Year Update

Bruce H. Corliss
UNOLS

DESSC June 3, 2013

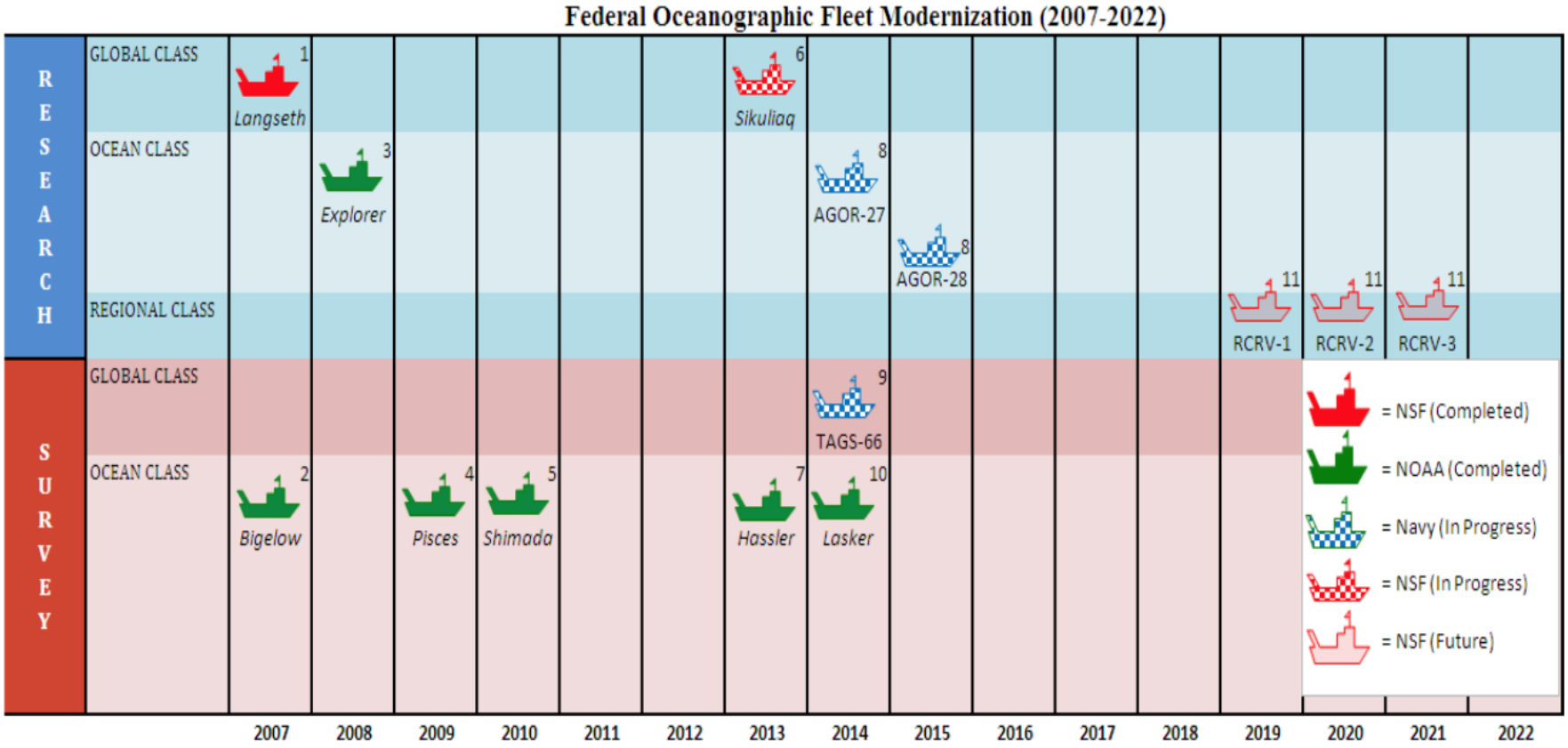
R/V Cape Hatteras

1981-2013

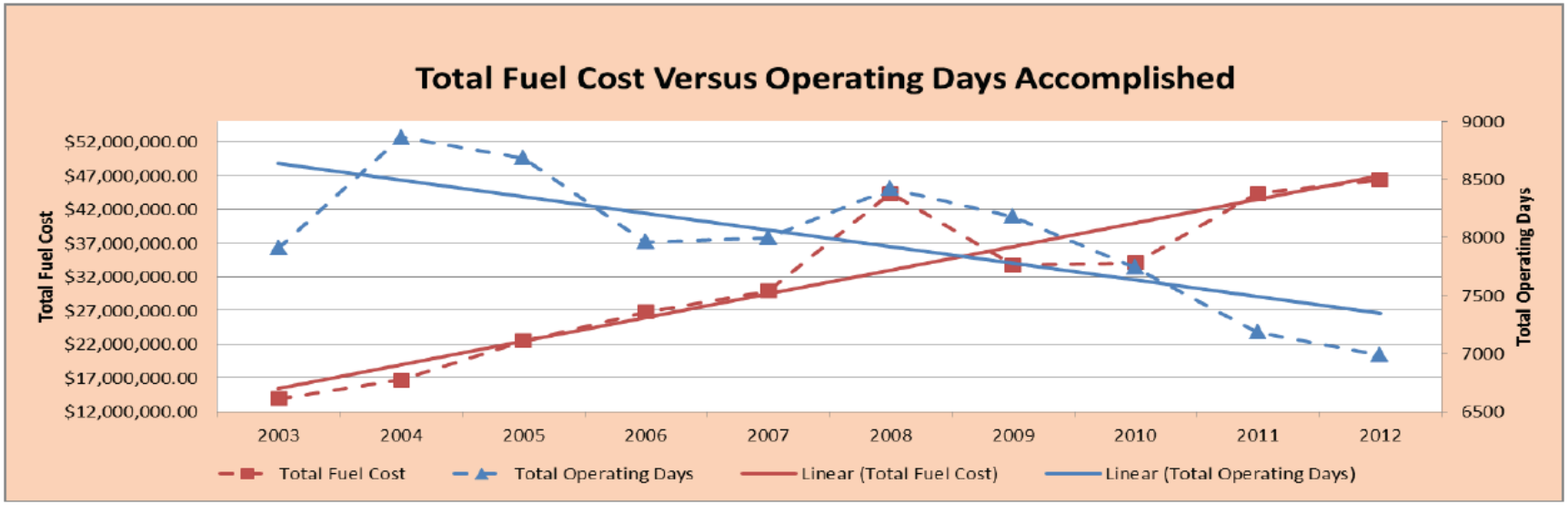
POINT SUR's Transit South

- Departs Nov. 28th 2012
- 31,000 Nautical Miles
- 38 Days Transit
- 31,000 Gallons Fuel used
- Two re-fueling stops
- 1 Christmas tree

FSR – Fleet Modernization



FSR – Fuel Costs



- FY03 - $13.9M in Fuel $122.5M Total Cost ($0.84/gallon) 11% of budget
- FY11 - $44.4M in Fuel $180.0M Total Cost ($3.33/gallon) 25% of budget

Fleet Scheduling Portal

- A scheduling portal will be hosted on the UNOLS server to allow for more efficient collaborative opportunities between principle investigators
- The portal oceanographic cruise information for UNOLS, NOAA, EPA, USAP, and USCG ships
- This portal is expected to be completed in April 2013
- This portal satisfies a milestone in the National Ocean Policy Implementation Plan

FIC Meeting Action Items

1. FIC to draft letter of support for mid-life refit plans for *Thompson, Revelle* and *Atlantis – will stress importance of this $15-30M/vessel investment for science missions (e.g., OOI and GEOTRACES) requiring Global Class vessels over next 15-20 years*.
2. FIC voted unanimously against recommending continued NSF support for further evaluations of Long Corer repositioning on the *Marcus Langseth . MG&G community encouraged to continue looking at other alternatives for Long Corer and to increase proposal pressure*

3. FIC is taking up action on drafting a new web-based *Fleet Improvement Plan* (FIP) that considers elements of a Decadal Ocean Science plan and a matrix of future Fleetwide Science Mission Requirements - *writing assignments to follow*

4. FIC and UNOLS Office to develop a more specific survey for operator feedback to arrive at ranges for FOY estimates

5. FIC was unable to conclude discussion of recommendations for replacement of aging Coastal/Local class - *will return to this issue by webinar and report back to Council*

UNOLS Chief Scientist Training Cruise Program Report

2011- two cruises, some foreign applicants

2012- one cruise, US institutions only

2013-demand TBD
October 16-25
R/V Endeavor

<u>Demand Factors</u>:
Timing
Publicity
Region?

R/V *SIKULIAQ*

FIC/Council - March 2013

- Dock and Builders Sea Trials – **May 2013**
- Preliminary Acceptance by UAF – **August 2, 2013 (1 week delay)**
- Science Trials/Transit (Phase IV) – **Sept 2013 – Jan 2014**
- Alongside Seward, AK – **February – March, 2014**
- Ice Trials – **April 2014 (MREFC)**
- Warranty Shipyard – **May/June 2014 (MREFC)**
- Begin Science Operations – **June 2014 (Ship Ops Program)**

Regional Class Research Vessel (RCRV)

FIC/Council - March 2013

- OSU selected as the Lead Institution for the RCRV project
- Funds awarded to Conceptual Design Review (CDR) only - **December 3-5, 2013 at NSF**
- Advancement to Preliminary Design Review (PDR) contingent upon successful CDR and availability of funding
- Three vessels currently planned
- Actual number of vessels based on projected science utilization and availability of funding

Regional Class Research Vessel (RCRV)

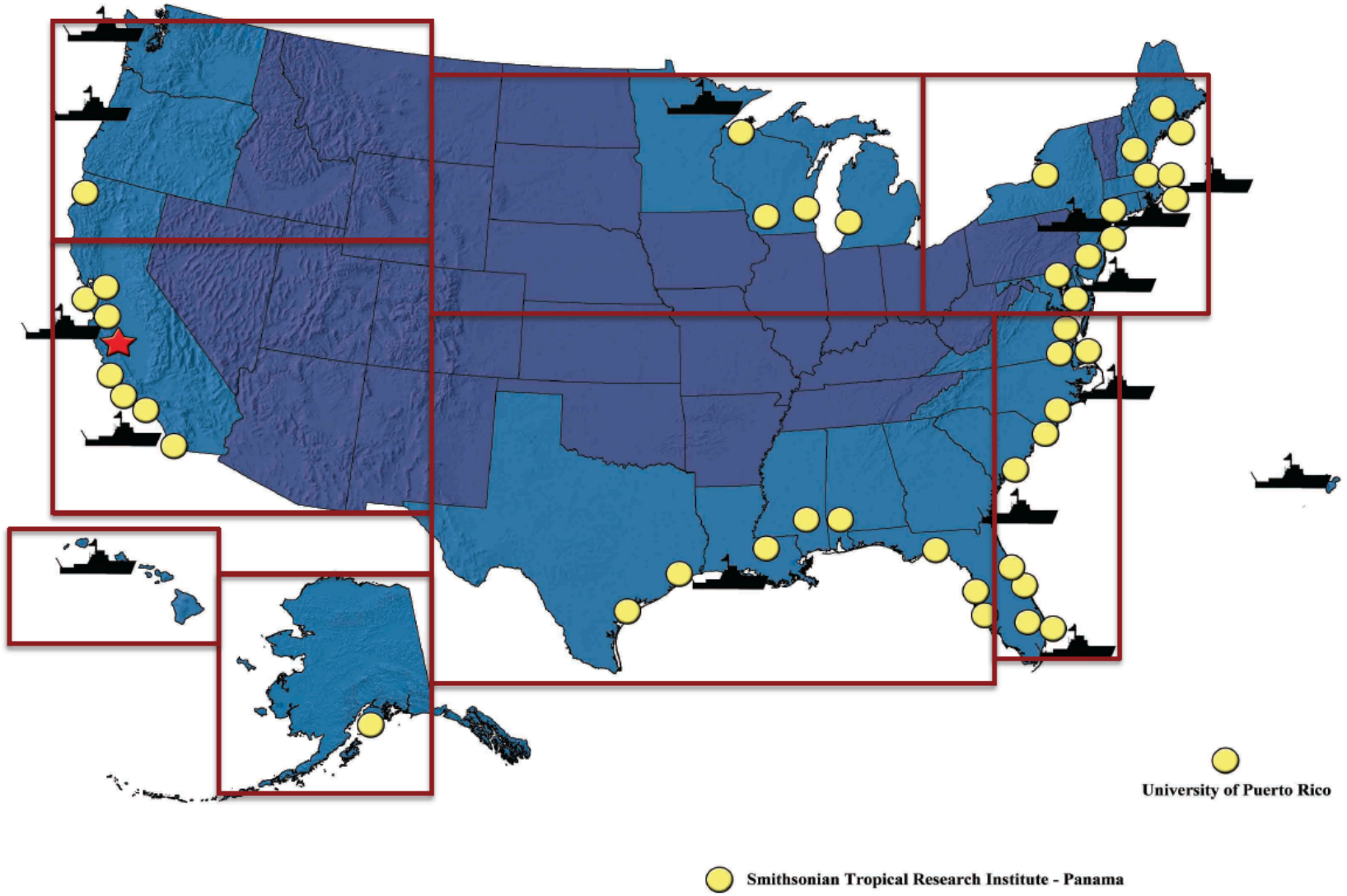
FIC/Council - March 2013

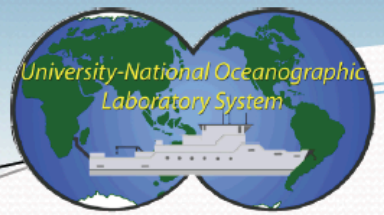
- Operator selection to take place once number of vessels is known - **Solicitation in early CY 2017**
- Open design refresh process through RCRV Science Oversight Committee (SOC) and OSU reports to UNOLS
- Regional representation on the SOC during design refresh
- MREFC Funding Request for FY17 in **March 2015**
- First RCRV operational in **~CY 2020**

UNOLS Goal 2010/2011: UNOLS SPEAKER SERIES

- To establish a speaker series to highlight UNOLS ships and oceanographic research and to serve as an outreach activity to non-UNOLS colleges and universities
- Particular attention to institutions with under-represented minorities in the marine sciences
- Series to run for three years beginning in fall 2012 and evaluated in 2015.

UNOLS MEMBERSHIP





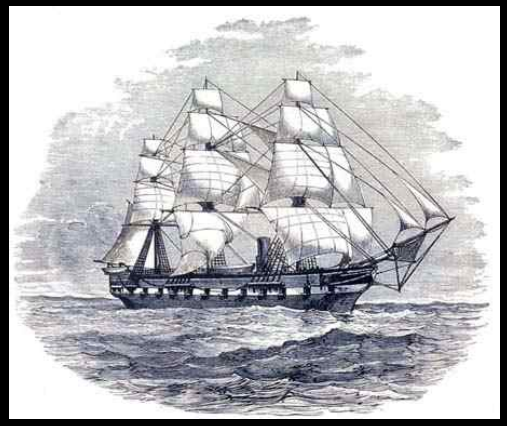
Recent Activities and Tasks

- Phone Meeting with Regional Coordinators: Feb 7, 2013
- Establish an email list serve for the Coordinators
- Created a Speaker Series DropBox.
- Create a UNOLS Flyer that can be used to recruit host institutions.
- Post the UNOLS Marine Tech Flyer in the DropBox
- Create a spreadsheet for tracking the Speaker Series Activities.
- Hold quarterly meetings
- Recruited first non-coordinator “speaker”

Greening the Research Fleet

January 10-11, 2012

Nicholas School of the Environment



?????

Greening Shore Facilities: UCSD Nimitz

Bruce Applegate and Zoltan Kelety

Sullivan Solar Power
Leading the Solar Energy Revolution

1-800-SULLIVAN

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Home > Commercial > UCSD Nimitz

UCSD Nimitz

Prev Next

Solar Installation Location:

San Diego, California

System Size:

82.512 KWAC

System Components

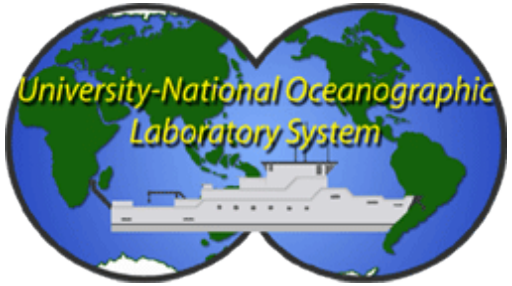
Modules: (406) Sharp NU-U235F1
Inverter(s): (1) PV POWERED PVP 100KW
Mounting: Roof

This 82,500-Watt solar installation at Nimitz Marine Facility was done as a part of University of California, San Diego's "Clean Renewable Energy Project" which consists of five separate UCSD project sites, all with specific requirements. With a wide open roof, this site lent itself well to solar. The project employs Sunlink ballasted racking and the system is uniquely attached to the roof without penetrations.

Around the Pier: Scripps Now Powering Point Loma Ship Facility with the Sun

on OCTOBER 7, 2012 · 2 COMMENTS

Nimitz Marine Facility installs photovoltaic system



University of Delaware: R/V Sharp
Bill Byam

Power Use and Operational Efficiency

1. Duty cycle study carried out by AKA. Monitors on power panels, drive motors and rectifier panels.

2. Four months of data.

University of Alaska
R/V Sikuliaq
Dan Oliver, ARRV Project Manager

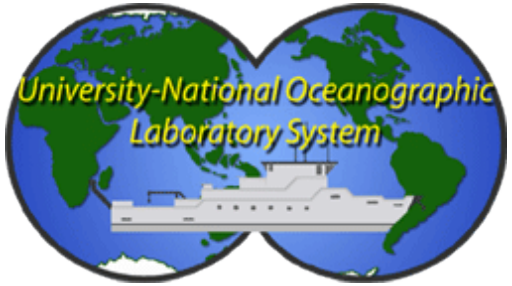
1. Non-ablative bottom coating: reduced frictional resistnace for improved fuel economy. Low VOC results in reduced solvent emissions and no release of biocides into the water: International Paint- Intershield 1673 Inerta 160.

2. Incinerator to burn solid waste and waste oil. Burning waste oil reduces the need for diesel to run the incinerator.

3. Integrated power plant which combines ship's service electrical power and propulsion power into a common electrical plant with load management system. More efficient as it matches power output with power needs.

4. Waste heat recovery system to heat interior of ARRV and for hot potable water.

5. Fluorescent lighting to gain energy efficiency over incandescent lighting.



6. Ultrasonic anti-biofouling systems used in seachests.

7. Bio-degradable hydraulic oil to minimize environmental risk from accidental discharge.

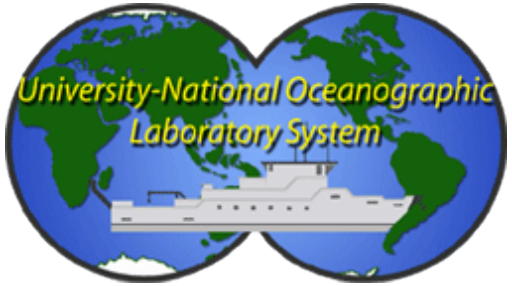
8. Double bottom hull design: no fuel or oil storage tanks next to shell.

9. Diesel engines are EPA Tier II compliant with MARPOL Annex VI combustion exhaust limits.

10. MSD will exceed US requirements and comply with pending MARPOL standars. Fress water flushing systems.

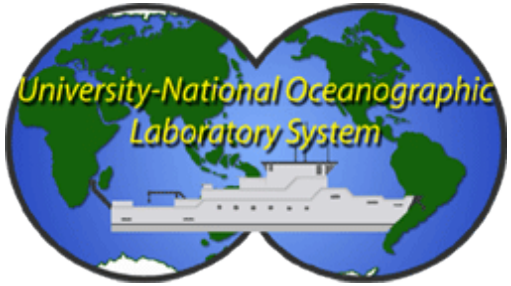
11. Trash compactor to process solid waste

12. Minimizes underwater radiated noise for science activities and reduced impact on marine mammals



Graduate School of Oceanography
University of Rhode Island
R/V Endeavor: Tom Glennon

1. Biofuel (B5) used for engine: used vegetable fuel
2. Bio-hydraulic fluid used in A-frame, J-frame, portable Knuckleboom crane and main crane.
3. Bio-lube for weather deck machinery: grease bearings and sliding surfaces
4. Proposal for energy monitoring and audit by Alaris to be submitted this summer to NSF



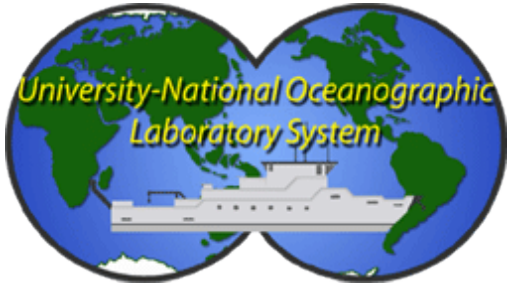
SNAME Marine Vessel Environmental Performance (MVEP) and SuPORT

Tim Leach (Glosten) and Craig Covil (ARRUP)

As outgrowth of Green Workshop, Glosten and ARRUP are working to develop criteria to provide tools to consider the overall impact of and operating and maintaining port facilities and vessels.

Phase 1 - Introduction and Information Gathering
Phase 2 - Performance Analysis / Analysis Tools
Phase 3 - Recommendations for Performance Improvement
Phase 4 - Implementation

The goal of this process is to provide UNOLS operators the ability to measure and compare environmental performance of ships and ports in order to facilitate reductions of overall impact to the environment and to reduce operating costs



Decadal Survey of Ocean Sciences
Nominations:

The Ocean Studies Board of the National Research Council is pleased to announce the start of an new study requested by the National Science Foundation, "A Decadal Survey of Ocean Sciences: Guidance for NSF on National Ocean Research Priorities."

We request your nominations for potential committee members. We are seeking a broad range of nominees in the ocean sciences and related fields, including international experts.
Please enter your suggestions for potential committee members via the online form (http://www.surveygizmo.com/s3/1260708/Nominations-for-OSB-Decadal-Survey) by June 17, 2013.

Contact Deb Glickson (dglickson@nas.edu) or Susan Roberts (sroberts@nas.edu) for more information about the study.