Ocean Research and Resources Advisory Panel

National Oceanographic Partnership Program

Consortium for Oceanographic Research and Education
1201 New York Avenue NW, Suite 420
Washington, DC

30-31 October 2006

Agenda

Monday, 30 October

0830-0900  Assemble/Breakfast

0900-0930  Introduction (Ellen Prager, Chair)
- Welcome, opening statements, introductions
- Review of the agenda
- Review of the 5-6 June 2006 ORRAP meeting minutes
- Review of the 5-6 June 2006 ORRAP meeting actions

0930-1000  Research to Applications Task Force—Introductions and charge
(Steve Weisberg, Vice-chair)

1000-1200  Going from research to applications— Federal agency approaches
- NOAA (Mary Glackin)
- NOAA (John Boreman)
- EPA (Bill Benson)

1015-1030  Break
- Army COE (Jack Davis)
- FWS/DOI (Dan Ashe)
- NASA (Lawrence Friedl)
- Navy (Bob Winokur)

1200-1300  Working Lunch

1300-1500  - Facilitated panel discussion (Steve Weisberg, Vice-chair)

1500-1530  Break

1530-1630  - Continuation of panel discussion
1630-1715  ORRAP discussion of potential action items from the “Going from research to applications” session (Ellen Prager, Chair)

1715  Adjourn

1800  Dinner (Optional)

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Tuesday, 31 October

0830-0900  Assemble/Breakfast

0900-0930  Reconvene (Ellen Prager, Chair)
- Review of previous day’s presentations and discussions
- Review of action items from previous day’s sessions

0930-1000  Status report on the Ocean Observing Initiative (John Orcutt, Scripps Institution of Oceanography)

1000-1020  Break

1020-1040  Interagency Working Group on Ocean Education – recent and planned activities (Lisa Rom, National Science Foundation)

1040-1100  Report of the Conference on Ocean Literacy (Marlene Kaplan, National Oceanic and Atmospheric Administration)

1100-1130  ORRAP discussion of future direction for the Education Sub-panel (Matt Gilligan, Chair, Education Sub-panel)

1130-1200  Legislative update (Nina Young, Consortium for Oceanographic Research and Education)

1200-1300  Working Lunch

1300-1320  Subcommittee on Integrated Management of Ocean Resources – Update (Gerhard Kuska & Chris Kearney, SIMOR co-chairs)

1320-1400  Joint Subcommittee on Ocean Science and Technology – Update including the Ocean Research Priorities Plan and Implementation Strategy (Richard Spinrad, JSOST co-chair)

1400-1500  ORRAP Business Session
- Report on the SIMOR-ORRAP officers’ telephone conference of 13 July 2006 (Debra Hernandez, Vice-chair)
- Education Sub-panel (Matt Gilligan, Chair, Education Sub-panel)
- Industry Sub-panel (Andy Clark, Chair, Industry Sub-panel)
- Review of action items from today’s sessions
- Other business

1500-1530 Public comment period (Mel Briscoe, Designated Federal Official)
1530-1545 Meeting wrap-up and scheduling of next meeting (Ellen Prager, Chair)
1600 Adjourn
5 June

Introduction
E. Prager called the meeting to order at 0900. Introductions were made around the room. The Agenda of the Ocean Research and Resources Advisory Panel (ORRAP) meeting was reviewed. The Minutes of the 17-18 January 2006 ORRAP meeting were approved without changes, and the Actions of that meeting were reviewed to ensure completion.

Bridging the Gap between Science and Decision Making
Invited guests made presentations on various topics specific to the issue of bridging the gap between science and decision making.

Efforts to translate scientific data and information into resource management tools and products
K. Matso and R. Langan, of the Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET), introduced the CICEET program and the problem of transitioning research findings into products. They discussed pitfalls commonly encountered, including researchers’ lack of interest in the application of their data and the dearth of integrators between the research and application communities. C. Smith suggested that researchers would show more interest if they were involved in the writing of proposal solicitations. The presenters agreed, adding that end users should be involved from the beginning of the process.

Raising the public’s environmental IQ through weather forecasts
D. Jones explained the background and operational capabilities of StormCenter Communications, Inc., whose main theme is communicating science to the public effectively. He highlighted the challenge of framing scientific results in terms of the societal benefits they confer, and pointed out that media outlets would devote more coverage to science if they were presented with a mutually beneficial revenue model.

The Sea Grant Extension Services process
L. Cammen provided an overview of the National Sea Grant College Program’s communication network and Extension Services’ outreach efforts, which aim to translate science from laboratories to end users. He described the stages involved in the “Diffusion
of Innovations” process, the technical - as well as social - process whereby scientific innovation is communicated over time to members of a social system. The point was made that it is equally important to change the mindset of scientists in this process as it is to change the mindset of the users of the information.

**Improving links between science and coastal management**

G. Carter, from the Coastal States Organization (CSO) office, discussed the need to improve the communication between scientists and resource managers, citing the disconnect between what scientists view as necessary and what managers view as necessary. She called attention to the CSO’s Science to Management Initiative, which aims to bring coastal scientific and management communities together to identify managers’ needs, share scientific findings, and improve decision making. She highlighted key examples of managers’ needs and noted that land use is the top priority among the management community. The need for increased ocean observation capabilities was iterated. The issue of delivering useful information to those who could use it was raised, and future insight from the ORRAP was requested.

**Oceanographic information products for risk aversion for fisheries, the oil & gas industry, and homeland security**

M. Roffer from Roffer's Ocean Fishing Forecasting Service, Inc offered a business perspective on the challenges and mechanisms of translating data into applications useful to a broad array of users (e.g., general public, resource managers, emergency planners, members of industry, etc.). He explained his company’s services, which use satellite-derived data to locate fish real-time, and elaborated on how scientific products can be delivered to clientele in a useful, timely, and user-friendly manner. He stressed the importance of putting scientific language in the language of the non-scientist, as well as delivering data products and tools that are easy to use on desktop computers.

**Transitioning of science, technology and ideas into improved fleet/force capability**

P. Gruber, from the Office of Naval Research (ONR), explained the ONR’s approach to transitioning research to the operational naval fleet. She explained that oftentimes the pathway from research to applications is not serial and can suffer delays due to underutilization of data. She emphasized the importance of program managers maintaining a broad research strategy so as to provide technical options. J. Eckman called attention to the ephemeral - but critical - relationships between ONR program managers and members of the operational fleet due to high personnel turnover.

**Panel Discussion**

S. Weisberg facilitated a panel discussion on bridging the gap between science and decision making. He provided background on the issue, noting that it was discussed at the Ocean Research Priorities Plan (ORPP) Workshop in April 2006 and accepted as a theme in the ORPP as well as a topic of interest to the Interagency Committee on Ocean Science and Resource Management Integration (ICOSRMI). He framed the discussion in the context of three areas: 1) Challenges, 2) Solutions, and 3) the ORRAP’s ability to help. Common challenges that were raised included:

1. Convincing resource managers that a new approach is better and in turn getting
them to change their current approach;
2 Convincing scientists to change their approach, even though they may have limited skills and experience in the new approach;
3 Asking scientists to be translators of their data, in addition to being generators of those data;
4 Finding new, effective vehicles for communicating science, as there are too few at present.

Common solutions that were raised included:
1 Increasing the interpersonal contact with end users, including involving end users in the Request for Proposals (RFP) process;
2 Developing a training program for science translators;
3 Altering the reward system for researchers;
4 Involving members of industry in the translation process.

Lengthy group discussion followed on ways in which ORRAP could help address the challenges involved with bridging the science-to-decision making gap. Should not ask end users what they need; instead, should ask them what their problems are. What ensures the most results is involvement of users - particularly industry members - throughout the process from RFP creation to proposal review, as interpersonal relationships are of extreme importance to fostering collaborations between researchers and science translators. The Small Business Innovation Research Program provides a good model since RFPs and ensuing contract awards are broken into landmark phases of achievement. Extra value could be offered to proposals that include partnerships with members of industry. It was noted that the funding system currently in place for funding basic research is not very applicable to funding other types of research, so the possibility of changing the current funding system, with new performance metrics, was suggested. The difference between researchers’ perspective and science users’ perspective was highlighted: whereas the goal of researchers is to develop a new product, the user goal is to be able to use the technologies that are developed. Thus, the need for easy tools for users to manipulate and utilize data from their desktops was expressed.

P. Merilees made the point that the translation process actually requires more resources than the basic research process. Thus, if the proposal review process is weighted too heavily in favor of applications, then funding is taken away from basic research. He suggested that a better approach is to fund research that develops technologies that can then be commercialized. It was mentioned that the translation problem is also a resource problem, as proposal budgets may soon need to incorporate the capacity to translate their projects’ findings. One prevailing sentiment called for the re-thinking of the current application of funds, noting that more money is not necessarily the answer, nor is preferential funding of applied research over basic research.

The ORRAP discussed possible recommendations it could make to federal decision makers that would lead to impact but at no significant additional cost. The message was stressed that it is vital for research - as it relates to societal benefits – to be conveyed to the public. The need was expressed to conduct regional environmental forums to recruit
local scientists and managers to commit to addressing these issues, since managers need
special instructions on how to handle specific issues, not just a general white paper
detailing a list of problems. There was general agreement that it is better for researchers
to train those who specialize in outreach (e.g., Sea Grant Association extension agents),
who can in turn train the end users of research, thereby building the capacity of the
outreach community.

It was recommended that the research-to-applications issue be a theme in the ORPP. The
group discussed potential action items related to bridging the gap between science and
decision making. The idea was proposed to form a Sub-panel to address the issue. The
ORRAP decided to prepare a presentation for the ICOSRMI summarizing the "lessons
learned" that were identified during the guests' presentations and listing possible methods
to attack the issue, drawing from examples of groups already focusing on the issue. The
ORRAP would also invite federal agency representatives to generate a list of lessons
learned from within the federal structure.

**National Shoreline Management Study**

L. Martin (U.S. Army Corps of Engineers) gave a description of the components,
rationale behind, and goals of the National Shoreline Management Study (NSMS). She
focused on the importance of collaboration and roles the Ocean Action Plan (OAP)
entities could play in the NSMS. She also listed the recommendations to Congress that
the NSMS has made in the three years since enactment of its authority. E. Prager inquired
about major obstacles that the NSMS is facing as it moves forward. L. Martin replied that
complexities arise since all parties interested in shoreline management see themselves as
intricately involved, thus creating competing interests.

A. Clark suggested using the NOPP process to issue a Broad Agency Announcement
(BAA) on this topic, especially considering NOPP agencies are involved in the NSMS. J.
Eckman informed the group about the current NOPP solicitation on Sediment Transport
Modeling. L. Martin attested to the BAA's importance but questioned how it related to
resource management. R. Seymour commented that NSMS is primarily a resource
management program - not a scientific research program - and suggested that the
Subcommittee on Integrated Management of Ocean Resources (SIMOR) adopt the topic
as a priority. M. Glackin agreed to consider integrating the topic into the SIMOR
priorities.

E. Prager asked if the NSMS has a document describing its status, actions it plans to take,
and directions for future activities. L. Martin responded saying that such a document is
under revision.

**Subcommittee on Integrated Management of Ocean Resources - Presentation and
Discussion**

M. Glackin discussed the recent activities of the SIMOR, noting that its Work Plan was
approved by the ICOSRMI in March 2006 and the SIMOR is now working to implement
the Plan. Subsequent discussion focused on the organization and content of the Plan and
its mix of short-term deliverables and long-term efforts. The various outreach activities of

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SIMOR were also discussed, which included hosting Town Hall meetings and sessions for receiving stakeholder input.

On the topic of improving communication across the research-to-applications issue, SIMOR-ORRAP opportunities for collaboration were explored. N. Rabalais asked whether there was a mechanism in place for the ORRAP to be privy to the activities of the SIMOR Work Plan working groups. M. Glackin had no initial suggestions, as the Work Plan was provided to the ORRAP more for discussion and consideration than for action. S. Weisberg noted the overlapping ORRAP interest in Work Plan Priority #2 and stressed the value of regional collaborations in bringing together various stakeholders, as regional and statewide collaborations are viewed upon favorably in Congress.

M. Glackin asked to talk to the ORRAP chairs about one of them attending a future SIMOR meeting. E. Prager thanked M. Glackin for presenting and expressed excitement about continued ORRAP-SIMOR collaboration.

**Joint Subcommittee on Ocean Science and Technology - Presentation and Discussion**

The co-chairs of the Joint Subcommittee on Ocean Science and Technology (JSOST) discussed the development of the ORPP, including briefing the ORRAP on the structure and results of the April 2006 ORPP public workshop. They noted the challenges and research needs that were identified and prioritized during workshop discussions, highlighting the attention drawn by the research-to-operations issue (and more specifically research-to-applications). They covered the near-term timeline for the ORPP, which included prioritization of the ORPP themes, and the long-term timeline, which included incorporating National Research Council (NRC) comments into the ORPP and developing an Implementation Strategy (IS) to accompany the ORPP. The IS will address, among other things, how certain White House entities will work with other federal agencies to ensure that interagency planning reflects ocean research priorities.

An overview of the JSOST interagency working groups (IWGs) was given. Highlights included the signing of the charter for the IWG on Ocean Observations (which will take over the duties of the Ocean.US Executive Committee), and the eventual finalization of the charters for the IWG on Ocean Partnerships (formerly the NOPP IWG), the IWG on Infrastructure (formerly the NOPP Federal Oceanographic Facilities Committee), and the IWG on Ocean and Coastal Mapping. D. Walker noted how fast OAP activities are moving and welcomed continued ORRAP participation.

E. Prager asked how the JSOST was planning on achieving high visibility and support for the ORPP and IS once they are released. She acknowledged that the scientific community would certainly be supportive of the ORPP but questioned the assurance of outside (including government) support. R. Spinrad explained that no rollout strategy was currently in place but that high visibility was a top priority. He noted the need for agency members to ensure that their respective agencies are briefed on, have a chance to vet, and are educated on the ORPP. Additionally, a full campaign of hearings on Capitol Hill is planned. M. Leinen stressed the importance of explaining how the ORPP was developed.

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and ensuring that outside comments influence its development despite the reality that exact comments may not appear in the document. She encouraged the ORRAP to provide suggestions for ORPP outreach, and the ORRAP agreed to send suggestions following the meeting. The ORRAP also decided to send comments - focused on prioritization - on the latest ORPP draft to the JSOST after 19 June 2006.

6 June

E. Prager reconvened the meeting at 0900. Notable discussion topics and action items of Day 1 were reviewed.

A. Clark asked if the focus of the NOPP BAA process will now include resource management activities. M. Briscoe confirmed, noting that the IWG-OP charter recognizes the SIMOR as a sister entity and will eventually expand the BAA process to encompass resource management topics. Since the issue is important to both the JSOST and the SIMOR, the ORRAP could focus on seeing that the research-to-applications translation problem assimilates into the BAA process.

Ocean Biogeographic Information System User Needs Assessment

J. Ausubel informed the group that a U.S. node for the Ocean Biogeographic Information System (OBIS) has been established (as the ORRAP recommended), thus forming a formal locus for the OBIS in the U.S. He presented the OBIS User Needs Assessment and reported that the OBIS capacity has been improved to be more user-friendly. He recommended that the ORRAP endorse the application of the OBIS by users outside of academia. E. Prager questioned how the ORRAP can use the User Needs Assessment to build support for the OBIS. The NOPP Office will post the document on the NOPP website. Additionally, J. Ausubel suggested following through on previous ORRAP recommendations and actions related to the OBIS.

J. Ausubel proposed that the ORRAP write a brief commentary (1-2 pages) drawing attention to the OBIS recommendations, particularly in the U.S. context. This commentary would be addressed to Mark Fornwall, who is organizing the U.S. OBIS node. S. Weisberg acknowledged that the findings of the User Needs Assessment were appropriate but that the critique of the OBIS should not have to do with improving the functionality or "userability" of the system. Rather, it should deal with improving the quality of the data entering the system.

A. Clark called attention to the position opening for a person at the Ocean.US office dedicated to the OBIS. J. Ausubel stated that funds were available for a sabbatical or fellowship of 3-6 months but that applicant response has been limited. M. Briscoe commented that if a specific individual is desirable, someone ought to contact that person and convince him/her to take the position. J. Ausubel agreed that a more aggressive approach is necessary and said that the position would be good for a PhD or post-doctoral student.
C. Smith commented that the flora of the Northwestern Hawaiian Islands has just been inventoried and that OBIS can be more reflective of marine flora if it were to incorporate this data. J. Ausubel stated that OBIS aims to incorporate all 200K-220K species of marine plants by 2010 and encouraged C. Smith to contact Mark Fornwall.

M. Gilligan inquired about the OBIS overlap with invasive species, noting the value of tracking these animals. J. Ausubel commented that there has been a lot of discussion on this topic. The data on invasive species in the U.S. is kept at the Smithsonian Institution, with whom the OBIS office has been discussing collaboration. Practical problems (e.g., firewalls) have hindered the process but have nearly been overcome. It was stated that it might be a good idea to invite the OBIS representatives to a future ORRAP meeting.

ORRAP members agreed to review the User Needs Assessment, provide J. Ausubel with comments, and circulate the document through whichever channels possible.

**Legislative Update**

N. Young provided an update on legislative affairs of relevance to the ORRAP, including the concurrence of this meeting with the Capitol Hill Oceans Week (CHOW). She noted that ocean observations and the Census of Marine Life are the topics of upcoming CHOW panels, and she introduced several coalitions that draft letters, request funding and legislative, promote budgets, and generally show a unified front in the effort to lobby for ocean issues. R. West explained the history of the rationale behind these coalitions and spoke about the need for the National Oceanic and Atmospheric Administration (NOAA) to embrace the Integrated Ocean Observing System (IOOS). He discussed the need for the NOAA to move away from its current budget format and request large, ambitious sums for the integration component of ocean observations.

N. Young reviewed the status, impact, and likelihood of passage of various pieces of current ocean legislation. K. Turgeon expressed concern that, even if passed, the legislation might end up as unfunded mandates within agencies. It was commented that one obstacle to advancement of ocean issues on Capitol Hill is a result of not having many ocean advocates within Congress.

**National Water Quality Monitoring Network**

G. Mallard (U.S. Geological Survey) presented on the National Water Quality Monitoring Network (NWQMN), which was called for in both the U.S. Commission on Ocean Policy report and the OAP, to provide water quality information to federal agencies, the academic community and the general public. It was emphasized that the network is intended to enhance existing monitoring infrastructure rather than to replace other monitoring efforts currently underway in the country. G. Mallard provided details on the network's methods for gauging water quality constituents in rivers and estuaries and reported on the network's coordination activities with IOOS, namely briefing the Ocean.US personnel and meeting with the IOOS Regional Associations (RAs). It was commented that next steps for the network include the need to finalize the design of the network and complete an inventory of ongoing portions in order to analyze gaps and manage data effectively. The data resulting from network monitoring will be useful in
scientific literature as well as in resource management.

There was discussion about the monitoring plan under development by the NWQMN and what the review process was. G. Mallard responded that the ORRAP comments on the presentation were considered as part of their review process. The ORRAP noted that while it is not the proper body to review the technicality of the plan, it could certainly examine the goals of it. The ORRAP recommended that the NWQMN should undergo a formal, outside review by an independent body such as the National Research Council.

J. Reutter suggested involving the National Federation of Regional Associations in the NWQMN since each RA has an outreach and education department that can help distribute information to and identify products for the public.

S. Weisberg indicated that the plan was lacking in its attention to quality assurance, and G. Mallard announced that an appendix to the document will address quality assurance. S. Weisberg advised tying into the report how the existing network infrastructure and capabilities will be improved, especially in the context of how this effort was called for in the USCOP report and the OAP.

**Preview of the June 7-8 Conference on Ocean Literacy**

M. Gilligan and E. Prager led a discussion on the lead-up to the Conference on Ocean Literacy (CoOL), distributed the CoOL agenda for review, and explained that invitations were aimed at a diverse group of presenters who would not normally attend ocean literacy conferences. S. Roberts inquired about student attendance at the event, but E. Prager explained that, although student participation was a good idea, limited venue space prohibited it. C. Smith lamented the lack of Pacific Island and Alaskan involvement, and E. Prager acknowledged the advertising shortcomings of the event.

E. Prager will moderate a session on media perspectives on ocean literacy and M. Gilligan will moderate a session on ocean workforce diversity. M. Gilligan practiced his opening statement for ORRAP constructive comment.

It was announced that a resultant report will focus on the challenges and opportunities within ocean literacy. M. Briscoe suggested that the ORRAP analyze the CoOL and suggest how to improve this type of event for the future.

**The Oceans and Human Health Initiative-Ocean.US Workshop and other OHH Cross-Agency Efforts**

J. Trtanj (NOAA) presented on the role and activities of the NOAA’s Oceans and Human Health Initiative (OHHI) within an interagency oceans and human health effort. She gave background to the OHHI program elements that were established by the Oceans and Human Health Act legislation. She explained that the OHHI was taking an ecosystem approach to understanding causal relationships between humans, oceanic processes, marine ecosystem health, and human health outcomes, as well as proactive management efforts. She also reported on the work being conducted by the OHH Distinguished Scholars that were selected in 2005.
J. Trtanj spoke about the joint workshop between the OHHI and the Ocean.US, entitled “Assessing Public Health Risks: Coastal Observations for Decision Making,” that was held in January 2006 with the intention of identifying ways to assess public health risks. She went on to describe preliminary findings of the workshop, which include conclusions that: 1) there is not enough compatible epidemiological data, 2) sustained observation is imperative, and 3) there is a need for sustained regional and local communication, national standards and protocols for measurements, data management and communication, and modeling. The workshop report, which is undergoing review, will be used by the Ocean.US for its implementation plan(s), by agencies for planning and funding, and by the JSOST IWG on Harmful Algal Bloom's, Hypoxia and Human Health for its Interagency OHH Program Implementation Plan to Congress. S. Weisberg informed the group that the IWG-4H will likely provide this Implementation Plan at the next ORRAP meeting.

The ORRAP commended OHHI for following through on previous ORRAP recommendations, especially considering significant OHHI budget concerns. The ORRAP inquired as to what recommendations it could make to help support continuation of the program. It was commented that the OHHI is the focal point for bridging the gap between human health and the IOOS, so stable funding for the OHHI is critical. The ORRAP decided to remain aware of OHHI activities, review the OHH Implementation Plan when it is released, and then decide what recommendations - if any - to make.

**ORRAP Business Session**

*Charter*

M. Briscoe explained that the ORRAP's charter operates within the Department of Defense system and must officially refer to the body by the name its legislatively established name: Ocean Research Advisory Panel (ORAP).

**ORRAP membership status**

M. Briscoe explained an ongoing process which will affect the reappointment of current ORRAP members and appointment of new members. He informed the ORRAP that the Office of the Secretary of Defense (OSD) had hired an advisor to analyze how to eliminate 40% of its Federal Advisory Committee Act committees. The advisor's recommendation was to move stewardship of the ORRAP to another entity, like the NRC. The current status of that recommendation within the OSD is unknown. Another option for the fate of the ORRAP includes moving ORRAP to a different agency such as the NOAA, but that would be problematic because the enabling legislation requires the U.S. Navy to fund the ORRAP and thus it would be awkward for NOAA to bill Navy for ORRAP activities. Thus, reappointments and new appointments will likely be held up until a decision is made on the fate of the ORRAP. One potential compromise that might occur would be the reappointment of the three current ORRAP members (Ausubel, Prager, and Weisberg) whose terms are due to run out at the end of June 2006. However, this would not facilitate the appointment of any new members.

*Education sub-panel*

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M. Gilligan indicated that all Education Sub-panel items of interest were covered during the CoOL discussion.

*Industry Sub-panel*

A. Clark reported that all potential Industry Sub-panel members who were approached accepted their invitations with enthusiasm. Membership was intended to represent "organizations of organizations" as opposed to individual organizations. Availability of members for the inaugural Sub-panel meeting is being gauged. The ORRAP brainstormed on topics and questions to pose to the Sub-panel. A. Clark planned to inquire with the JSOST co-chairs as to whether he can distribute the draft ORPP to Sub-panel members for review.

*Other business*

M. Briscoe presented and distributed the outline of the ORPP, which was revised as a result of April ORPP workshop. Key changes during the revision included the elevation of quality of life as an overarching societal theme, as well as the combination of research translation with ocean education. The official title of the ORPP is “Charting the Course of Ocean Science in the United States: Research Priorities for a Maritime Nation.”

M. McCammon announced that the IOOS RAs are working with the NOAA to put on a workshop on ocean observations on 3-5 October 2006 to address the development of new and better ocean observation products.

A. Clark asked about the ORRAP’s official stance on the establishment of an IOOS program office. R. Toll spoke about a proposal solicitation issued by the Joint Oceanographic Institutions to establish a regional office out of which a cabled observatory would be based. It was decided that an ocean observing presentation would be requested for the next ORRAP meeting.

M. Feldman reported on the upcoming (September 2006) Biodiversity Workshop sponsored by the U.S. National Committee (USNC) of the Census of Marine Life. He mentioned that the USNC is working toward synergy with a similar Environmental Protection Agency workshop. He requested ideas from the ORRAP for workshop speakers.

*Public comment period*

M Briscoe opened the floor for public comments, but there were none.

*Wrap-up*

The ORRAP recognized and applauded the efforts of Phil Merilees, Nancy Rabalais and Don Wright whose final term as ORRAP members are up at the end of June 2006.

The ORRAP officers decided to prepare a presentation for the 13 July 2006 ICOSRMI meeting. The group discussed the possibility of conducting a workshop to address the translation of research to applications and it was decided that speakers would be invited to present on the topic at the next ORRAP meeting.
The NOPP Office was commended, and invited guests were thanked for their attendance.

It was decided that the next ORRAP meeting will be held on either 17-18 or 30-31 October 2006, with the exact set of dates depending on the amount of time the ICOSRMI Executive Secretary needs to receive briefing materials from the ORRAP in advance of the November 2006 ICOSRMI meeting.

The meeting was adjourned at 1530.
Meeting Attendees

**ORRAP Members** | **Organization**
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Mr. Jesse Ausubel *(via phone)* | Alfred P. Sloan Foundation
Dr. Peter Betzer | University of South Florida
Dr. Andrew Clark | Harris Maritime Communications, Inc.
Dr. Matthew Gilligan | Savannah State University
Ms. Debra Hernandez, Vice-Chair | South Carolina Department of Health and Environmental Control
Dr. Phil Merilees | National Center for Atmospheric Research (retired)
Dr. Shirley Pomponi | Harbor Branch Oceanographic Institute / Ocean Studies Board
Dr. Ellen Prager, Chair | Earth2Ocean, Inc.
Dr. Nancy Rabalais | Louisiana Universities Marine Consortium
Dr. Richard Seyalais | Scripps Institution of Oceanography
Dr. Celia Smith | University of Hawaii
Mr. Raymond Toll | Science Applications International Corporation
Dr. Stephen Weisberg, Vice-Chair | Southern California Coastal Water Research Project Authority
Dr. L. Donelson Wright | Virginia Institute of Marine Science

**Invitees**

Dr. Melbourne Briscoe, FACA Designated Federal Official | Office of Naval Research
Dr. Leon Cammen | Sea Grant Association
Ms. Jena Carter | Coastal States Organization
Dr. James Coleman | Louisiana State University
Dr. James Eckman, FACA Designated Federal Official (Alternate) | Office of Naval Research
Ms. Mary Glackin, SIMOR Co-Chair | National Oceanic and Atmospheric Administration
Ms. Morgan Gopnik | Ocean Conservancy
Dr. Patricia Gruber | Office of Naval Research
Mr. David Jones | StormCenter Communications
Dr. Richard Langan | Cooperative Institute for Coastal and Estuarine Environmental Technology
Dr. Margaret Leinen | National Science Foundation
Dr. Gail Mallard | U.S. Geological Survey
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<th>Name</th>
<th>Affiliation</th>
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<tr>
<td>Ms. Lynn Martin</td>
<td>U.S. Army Corps of Engineers</td>
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<td>Mr. Kalle Matso</td>
<td>Cooperative Institute for Coastal and Estuarine Environmental Technology</td>
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<td>Ms. Molly McCammon</td>
<td>National Federation of Regional Associations</td>
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<td>Dr. Don Oltz</td>
<td>New Bern, NC</td>
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<td>Dr. Mitchell Roffer</td>
<td>Roffer’s Ocean Fishing Forecasting Service, Inc.</td>
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<td>Dr. Shelby Walker</td>
<td>U.S. Global Change Research Program/JSOST</td>
</tr>
<tr>
<td>Dr. Robert Wayland</td>
<td>U.S. Environmental Protection Agency (retired)</td>
</tr>
<tr>
<td>Others Attending at times</td>
<td></td>
</tr>
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<td>Mr. Michael Feldman</td>
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<td>Dr. Jonathan Berkson</td>
<td>U.S. Coast Guard</td>
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<tr>
<td>Ms. Joanne Bintz</td>
<td>Southeastern Universities Research Association</td>
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<td>Dr. Susan Cook</td>
<td>Consortium for Oceanographic Research and Education</td>
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<td>Dr. Cynthia Decker</td>
<td>National Oceanic and Atmospheric Administration</td>
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<tr>
<td>Mr. Peter Fippinger</td>
<td>Consortium for Oceanographic Research and Education</td>
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<tr>
<td>Ms. Roxanne Nikolaus</td>
<td>National Science Foundation</td>
</tr>
<tr>
<td>Dr. Susan Roberts</td>
<td>National Academy of Science / Ocean Studies Board</td>
</tr>
<tr>
<td>Name</td>
<td>Organization</td>
</tr>
<tr>
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<tr>
<td>Mr. Richard Sikorski</td>
<td>Raytheon</td>
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<tr>
<td>Dr. Barry Stamey</td>
<td>Mitretek Systems</td>
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<tr>
<td>Dr. Dwight Trueblood</td>
<td>Cooperative Institute for Coastal and Estuarine Environmental Technology</td>
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<td>RADM Richard West</td>
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<tr>
<td>Ms. Nina Young</td>
<td>Consortium for Oceanographic Research and Education</td>
</tr>
</tbody>
</table>
## National Oceanographic Partnership Program
### Ocean Research and Resources Advisory Panel
#### 5-6 June 2006

### Action Items

<table>
<thead>
<tr>
<th>Action</th>
<th>Point</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Put together ORRAP presentation for 13 July 2006 ICOSRMI meeting</td>
<td>E. Prager</td>
<td>Thursday, July 6</td>
</tr>
<tr>
<td>Provide comments to K. Turgeon on latest draft ORPP</td>
<td>All</td>
<td>Tuesday, 4 July</td>
</tr>
<tr>
<td>Review OBIS User Needs Assessment and provide comments to J. Ausubel</td>
<td>All</td>
<td>Friday, 30 June</td>
</tr>
<tr>
<td>Distribute white paper(s) to ORRAP on “Bridging the gap” issues, e.g., best practices and lessons learned</td>
<td>D. Hernandez</td>
<td>ASAP</td>
</tr>
<tr>
<td>Follow up on ORRAP attendance at 8 August SIMOR</td>
<td>D. Hernandez</td>
<td>ASAP</td>
</tr>
<tr>
<td>Provide ideas to K. Turgeon on ORPP rollout strategies and target audiences</td>
<td>All</td>
<td>ASAP</td>
</tr>
<tr>
<td>Invite ICOSRMI agency representatives to present at next ORRAP meeting on lessons learned on the science to impacts translation gap problem</td>
<td>K. Turgeon</td>
<td>At least one month before the ORRAP October meeting</td>
</tr>
<tr>
<td>Present science to impacts translation gap issue to Industry Sub-panel for insight</td>
<td>A. Clark</td>
<td>ASAP</td>
</tr>
<tr>
<td>Distribute CoOL report to Education Sub-panel and coordinate a response</td>
<td>M. Gilligan</td>
<td>Once CoOL report is released</td>
</tr>
<tr>
<td>Check with JSOST co-chairs to see if the latest draft ORPP can be circulated among Industry Sub-panel</td>
<td>A. Clark</td>
<td>ASAP (Done – answer was “no”)</td>
</tr>
<tr>
<td>Write letter to G. Mallard: thanking her for presenting; informing her that ORRAP will make a recommendation to ICOSRMI on NWQMN; and suggesting NRC review of NWQMN plan</td>
<td>K. Turgeon</td>
<td>ASAP (Done June 13, 2006)</td>
</tr>
<tr>
<td>Post guests’ presentations and other relevant ORRAP documents on NOPP web pages</td>
<td>NOPPO</td>
<td>ASAP</td>
</tr>
</tbody>
</table>
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Dan Ashe  
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William Benson  
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A. **Official Designation:** The Committee shall be known as the Ocean Research Advisory Panel (hereafter referred to as the Panel).

B. **Objectives and Scope of Activities:** The Panel, under the provisions of 10 U.S.C. § 7903, and the Federal Advisory Committee Act of 1972, as amended, shall provide independent scientific advice and recommendations to the National Ocean Research Leadership Council.

C. **Panel Membership:** The Panel, under the provisions of 10 U.S.C. § 7903, shall consist of no less than 10 and no more than 18 members, representing the National Academy of Sciences, the National Academy of Engineering, the Institute of Medicine, ocean industries, State Governments, academia and others including individuals who are eminent in the fields of marine science, marine policy or related fields including ocean resource management. Panel Members appointed by the Secretary of Defense or designated representative, who are not Federal officers or employees, shall serve as Special Government Employees under the authority of 5 U.S.C. § 3109.

Panel Members, under the provisions of 10 U.S.C. § 7903, shall be appointed on an annual basis by the Secretary of Defense or designated representative, and shall serve no more than four years. The Panel Membership shall select the Chairperson and Vice-Chairpersons of the Panel for renewable one-year terms. In addition, the Secretary of Defense or designated representative may invite other distinguished Government officers to serve as non-voting observers of the Panel, and appoint consultants, with special expertise, to assist the Panel on an ad hoc basis.

D. **Panel Meetings:** The Panel shall meet at the call of the Designated Federal Officer, in consultation with the Chairperson, and the minimum number of Panel meetings is one per year. The Panel shall be authorized to establish subcommittees, as necessary, to fulfill its mission, and these subcommittees shall operate under the provisions of the Federal Advisory Committee Act of 1972, as amended.

E. **Duration of the Panel:** The need for this advisory function is on a continuing basis; however, it is subject to renewal every two years.

F. **Agency Support:** The Department of Defense, through the Secretary of the Navy and the Office of Naval Research, shall provide support as deemed necessary for the performance of the Panel’s functions, and shall ensure compliance with the requirements of 5 U.S.C. § 6.

G. **Termination Date:** The Panel shall terminate upon recession 10 U.S.C. § 7903.

H. **Operating Costs:** It is estimated that the operating costs, to include travel costs and contract support, for this Board is $192,000.00. The estimated personnel cost to the Department of Defense is 0.6 full-time equivalents (FTEs).

I. **Charter Filed:** January 20, 2006
ORRAP Education Sub-panel Charge

The purpose of the Education Sub-panel is to provide expert input to the Ocean Research and Resources Advisory Panel (ORRAP) on matters of both formal and informal education, strategic planning, and implementation being undertaken by federal partners in ocean research and education.

Working with other allied groups and individuals, the Sub-panel will work to enhance the coordination and implementation of ocean education efforts among academic, state, private, federal and other stakeholders.
ORRAP Industry Sub-panel Charge

The Industry Sub-panel is convened by the Ocean Research and Resources Advisory Panel (ORRAP) to facilitate a means for the U.S. industrial sector to provide their input, views and expertise in the following areas:

1) Achieving and sustaining an Integrated Ocean Observing System (IOOS);
2) Promoting lifelong ocean education;
3) Modernizing ocean infrastructure and enhancing technology development; and
4) Fostering interagency partnerships to increase and apply scientific knowledge.

Membership of the Sub-panel shall be comprised of the leadership of national organizations representing broad sectors of U.S. industry. Service on the Sub-panel is voluntary.
A. Official Designation

This Task Force will be designated as the Ocean Research and Resources Advisory (ORRAP) Panel Research to Applications Task Force (hereinafter referred to as the RATF).

B. Objectives and Scope of Activity

The RATF shall write, and deliver to the ORRAP, a short (15-30 page) report which:

1) Summarizes existing models for translating research results into timely and useful information, products, and technologies for a broad array of users (e.g., decision makers, resource managers, coastal planners, and regulators);
2) Highlights the lessons learned from use and development of these models;
3) Assesses the potential utility, advantages, and applicability of each model;
4) Identifies possible improvements to the models evaluated; and
5) Suggests the most effective and useful models for agencies to consider.

The report will be written in a manner intended to assist the ORRAP in making recommendations to the Interagency Committee on Ocean Science and Resource Management. It will also be intended as a resource to the Joint Subcommittee on Ocean Science and Technology as they develop the implementation plan for the Ocean Research Priorities Plan and to the Subcommittee on Integrated Management of Ocean Resources as they develop their work plan.

C. Membership

The RATF is composed of representatives of the ORRAP, one of whom will serve as Chair of the RATF and of persons from industry and academia who have expertise and/or experience in the translation of research to applications. Membership shall number between 10 and 12 people.

D. Workload

In accomplishing its work, it is expected that the RATF will meet in person no more than three times over the course of its existence and will
communicate between meetings via conference calls and emails. ORRAP staff will assist the RATF in accomplishing its work.

E. Period of Existence

The RATF will be impaneled effective October 15, 2006 and will terminate effective June 30, 2007 with the option for an extension if needed to complete its work.