

OUTER CONTINENTAL SHELF (OCS) SCIENTIFIC COMMITTEE (SC)

May 24, 2007

Expanded Proceedings

Peer-Review Update

Ms. Elizabeth Burkhard explained that the Office of Management and Budget (OMB) issued a bulletin in December 2005 on how to conduct peer review of disseminations containing influential information.

She reported the DOI wrote draft guidance on how to implement the OMB bulletin and members of the Committee had participated in its review. Unfortunately, it's still a draft.

The bulletin has several requirements beginning with determining which projects are appropriate for peer review, and developing a peer review plan for each of those projects. The peer review plan includes several components describing how that information will be peer reviewed, such as:

- including a paragraph that explains what decisions that document might potentially impact, the time frame for the review, and the type of external review,
- addressing whether there will be opportunity for public comment, and if so, for how long,
- discussing how comments are going to be handled, i.e., will the official peer reviewers have access to the other comments that are made and whether the comments will be made public,
- estimating how many peer reviewers are expected, and where they will come from, i.e., Federal employees or members of the public, and
- describing what level of expertise reviewers should have in order to be well-chosen to do this review.

She explained that this meeting is the first step in the peer review process since the Committee is looking at potential studies to evaluate methodology and scientific validity.

There are a lot of different levels of peer review beginning with just a basic review. Some studies won't get past this stage and some will need the highest level of review, while others fall in between the extremes. Some studies will be evaluated by a subcommittee and/or a scientific review board which will review the study documents. They may be involved with reviewing the statement of work (SOW), draft interim reports, and the final report or just with the final report. Involvement of peer reviewers can occur at any or all stages of a study, as appropriate.

She further explained that an example of the culmination of peer review is the NOPP process and the peer reviewed journals. The NOPP has a very well established peer review process which is much formalized and the MMS participates with them as much as possible.

The next effort is to develop a studies team that will develop criteria to determine what level of peer review is appropriate for a given study. Guidelines are being created drawing from the

OMB Bulletin and the DOI guidance and the Committee will be asked for its input in making certain those guidelines can be applied to the studies process, make it stronger, and make it formalized.

One of OMB's requirements is that the studies that are designated as influential get posted on the website with their peer review plans. She mentioned that currently there are two studies posted on the website with their peer review plans, as required by OMB. One of them is a study that addresses the issue of sea floor stability and the impact on oil and gas infrastructure in the Gulf of Mexico. The other is the *Sperm Whale Seismic Study* which is studying the biology of sperm whales and the possible effects of seismic exploration. MMS is close to receiving the final products for both of these studies.

Every June and December the website is reviewed and website is updated accordingly. Two more studies are going to be announced on the website soon, one includes the North Pacific whales in the Southern Bearing Sea addressing the distribution and abundance of whales and habitat use, and the other one is *A Comparison of the Cost of Energy for the Proposed Cape Wind Energy Project Site and Alternative Sites*, which is an economic model being used in the draft programmatic EIS.

She wanted to thank the Committee for its review of the Worldwide Literature Synthesis. Even though it did not need the highest level of scrutiny, the SC reviewed it to make sure that it covered all of the focused areas and that nothing important was omitted. She added that whenever a study is completed, it goes through another internal review using the ESP Performance Assessment Tool.

An additional requirement, although not specifically identified in the bulletin itself, was that the ESP was asked to create a way to measure the effectiveness of the program, i.e., is the information being generated useful, is it timely, did it answer questions that needed to be answered, and how is the information being used in the decision-making processes?

A tool has been developed that evaluates the success of a study and provides a numerical score. This tool is used whenever a study is completed. The form is completed and results are forwarded to OMB every quarter.

She again thanked the Committee for being an instrumental component in making the ESP stronger and stressed her appreciativeness for the extra time members serve on subcommittees and the special review requests that they have handled.

Open Discussion

Dr. Castellini asked Ms. Burkhard to summarize, from the investigator's point of view, which proposals will be funded. For example, if someone submits a proposal to MMS to do one of the things that had been called for, how is this going to be used in terms of whether or not it will be funded? Ms. Burkhard explained that in each RFP, there is a list of criteria for which it will be reviewed. The MMS is looking for a sound approach to developing the information that can be used to help with the MMS's mission goals. One of the primary factors in an RFP focuses on

scientific approach. The last thing that the Technical Proposal Evaluation Committee sees is the cost.

Dr. Smith suggested that some fraction of studies be selected and reviewed 5 or maybe 10 years after their completion since right after a project is completed, is not really the best time to judge the impact because what you are really looking for is studies that have an impact over time. And in the scientific field, many times the significance of the study is not recognized on the day of publication. Ms. Burkhard responded that that was a very good point, even though it is above and beyond what was specifically addressed in the OMB requirements. One of the things built into the ESP-PAT system was the ability to update it later. It is realized that very often it takes several years to get a peer review journal published after the MMS reports are completed. Mr. Cimato added that the ESP-PAT is designed to address a certain function; however, Dr. Smith's point is well taken and that certainly will be done.

Dr. Castellini commented that at last year's meeting, he took the message home to Fairbanks which generated a considerable amount of discussion among potential Principal Investigators (PIs) who were trying to respond to MMS's proposals. Once the work is completed has the PI done what was needed? What is it the MMS requires from the review process? Ms. Burkhard explained that the Government and the academic world have very different perspectives and very different cultures. One of the things we try very hard to do when we are developing the RFP is to make sure that there is adequate time to account for all those various things that come up when doing the fieldwork. If we see that you've gotten blown out of the water, you're going to need more time to get the data you need in order to get the answers that you need. So, we do our best to try to build in enough of a buffer to allow for completion of the project review on time.

Dr. Diaz commented that the draft DOI document really doesn't deal with public comment or public review and that the only part the public can play in the peer review is a nomination of qualified reviewers. Ms. Burkhard explained that, according to the OMB bulletin, there is a potential for public comment in the peer review plan.

Dr. Diaz stated that the document really doesn't deal with whether the results of the peer reviews will be public or kept confidential. Ms. Burkhard responded that the bulletin does address whether or not the comments should be made public and how to deal with the publicity of the reviewing panel. In the journal world, peer reviews are frequently conducted and it is unknown who submitted a particular comment. The government tends to prefer to be as absolutely totally transparent and open as possible. So, in cases where it is appropriate, we are encouraged to disclose both the comments and who made them.

Dr. Diaz asked her when she thought the draft DOI document will actually be final and implemented. Ms. Burkhard replied that she did not know; the deadline has long passed and there has been nothing new.

Discipline Breakout Groups Reports

Biology/Ecology Discipline Breakout Group

Members: Drs. Michael Castellini (Chair), Bob Diaz, Michael Fry, Michael Rex, Eugene Shinn, and John Trefry. Also in attendance were Drs. Mike Kosro and Joe Smith.

Pacific OCS Region

Dr. Castellini reported that the Region's focus is towards on-going operations and significant public outreach since there are no leases planned and there is no active decommissioning. Alternative energy is in its early stages.

The members were presented with seven FY 2008 proposals:

- Rocky Intertidal Resources (MARINe),
- looking at juvenile fish assemblages at platforms,
- California Island Symposium (ITM), and
- *Rocky Intertidal Mapping Using Light Imaging Detection and Ranging*.

The members were especially interested in:

- *Geographic Information System Database of Animal and Human Use off Southern California* in coordination with a variety of other agencies that are already doing major work along with that,
- bird and mammal distribution and how that varies with oceanography, and
- polychlorinated biphenyls (PCB) and polycyclic aromatic hydrocarbons (PAH) levels in platform associated fish.

General Observations:

- continues to be a good program done with limited funding due to significant outreach and coordination and
- FY 2008 list follows through on decommissioning efforts and Pacific OCS program shows good continuity.

Specific Recommendations for the MARINe Program:

- **Measuring and reporting rates of change at sites may be more important than static grade.** One of the major conceptual points brought up is the Region wants to be able to produce on a website grades for each, i.e., the grade off of Santa Monica beach is A+ or D- or something and be able to have kids look at the website, school teachers, and a variety of other groups and be able to say, this is a great day for the beach. The members asked them to think about this a little bit differently and say the grade is not as important as what you have scientifically in the change seen over time. They made a very clear point that they have 10, 15, 20 years worth of data on some of these beaches, and for those involved in climate change and the growing move towards trends data, the change in any particular environment is critical to understand the rates of change. This information would show scientists what the data will look like over time because the rate change will perhaps be more valuable to many organizations and groups and issues than the actual final grade.
- **Statistical expertise is critical in developing indices.** A lot of time was spent talking about existing intertidal indices and with their help provide some suggestions on that in terms of using some of these measures. This is a great project and those were some specific comments on that particular one.
- **Predicting abundance and distribution of seabirds and marine mammals under changing oceanographic conditions.** The members wanted to re-emphasize to do this in real time; short term is extremely difficult and will probably require a multi-year effort in

order to be able to get some real trends. Consider serving the pages through the OOS program for cohesive data sets.

- **Investigation of PCB and PAH contaminants in archived samples of platform resident fish.** This is with USGS and was ranked third in terms of funding. If it is possible to get the cooperative funding, the members suggested that this be moved to the top of the funded list because it has a guaranteed profit. If these studies are done, there are going to be numbers, and when and if these numbers are ever needed, and they most likely will be, they will be available.
- **Alternative Energy.** Platform anemometer data need to be archived to assist evaluation of wind resources offshore.

Ms. Mary Elaine Helix clarified that the study on predicting the seabirds and marine mammals, the Region's intent to use multi-years data that has already been collected to model. So, it really is to look at several years of marine mammal and seabird data and use that with the long term physical oceanography data that has been collected and compare those.

Alaska OCS Region

Dr. Castellini explained that there were four studies presented for FY 2008 in biology and ecology:

- COMIDA: aerial surveys of marine mammals,
- COMIDA: Chukchi Sea benthic monitoring,
- NAB: salmon use of area, and
- NAB: nearshore juvenile fish and crab.

The members had general comments:

- good job of planning in face of new and rapidly changing development prospects,
- concern that monitoring program path started in this suite of studies could end up consuming the program limiting future flexibility,
- ranking is reasonable,
- need to define more specific questions to include in the RFP,
- hold technical workshops to focus objectives of baseline and monitoring studies, especially benthic,
- other agencies involved/interested in work need to be specifically identified early on, and
- explore options for alternative funding opportunities utilizing industry contributions.

Gulf of Mexico OCS Region.

Proposed studies in FY 2008:

- Seismic activities and marine mammals.
 - seismic profiling
- Deepwater program natural and artificial reefs.
 - emphasizing *Lophelia* coral as common denominator

The Gulf of Mexico OCS Region has been doing great deepwater programs such as the artificial reef program and natural programs and combining them into one big package and using *Lophelia*

as the common measure in between those as to how well those different reefs and deepwater environments work for recruiting animals.

Proposed study for FY 2009:

- Shelf edge topography mapping for sensitive biological features. This is a new concept to try to find out where on the shelf edge there are any biological issues that could be coming up.
 - shelf edge topography is forward looking and meshes well. This is a good example of trying to get out in front of the issues.

Deep Water Recommendations:

- Combination of deepwater aspects (*Deepwater Artificial Reef Effect DARE II* {DARE II}, hard bottom, shipwrecks) into one project makes sense, but is risky due to cooperation requirements with other groups. Without commitments for cooperation, the effort could be deeply scaled back. The members recommended the Region keep the Committee informed throughout the process on how these CAs are going because, without them, there is going to be a need to re-evaluate the plan if MMS does not obtain these agreements.
- In terms of the seismic profiling, the members recognize the legal requirements for this work, but given the significant level of research in marine mammal acoustic issues, impact of platform noise on marine mammals, these soundings due to seismic may not be on the cutting edge of science at the moment because it is moving more towards sonar and pile driving and a variety of issues along those lines. However, the Marine Mammal Protection Act requires this effort.

Ms. Deborah Epperson wanted to clarify that the seismic activities and marine mammals study specifically hopes to address the mitigation requirements that MMS has through the National Marine Fisheries Service, which is 4 years of observer data from seismic activity in the Gulf. The region is really interested in looking at the data from working seismic levels as part of our mitigation requirements.

Headquarters.

There was a presentation from Headquarters, the *Estimation of Marine Productivity in MMS Planning Areas*. The goal for this study is to update previous information on marine productivity for use in next 5-year plan, updating approach to estimate primary productivity, and determine whether secondary and tertiary productivity should be incorporated into estimates and how.

This is a massive concept that is unfortunately vague in its requirement and it is difficult to do a combination of those two things. General comments to this study were:

- investigate the availability of recent data for primary productivity estimates,
- evaluate feasibility of adding secondary productivity to estimates...this is much more difficult, and
- explore potential of using fishery information (e.g., stock assessments) as estimate for marine productivity. Does requirement define “marine productivity”?

Open Discussion.

Dr. Smith commented that there is a perception of marine sound activities. It is not on the cutting edge of science; the real criteria are whether it supports the decision-making needs of the MMS. Dr. Castellini agreed and wanted to clarify that no one seems worried about this subject any longer, but it is a legal requirement. Dr. Smith said that he would not agree with Dr. Castellini's statement that no one is worried about this any more; that is a misunderstanding of the current political situation.

Physical Oceanography Discipline Breakout Group

Members: Drs. Michael Kosro, Joe Smith, Eugene Shinn, and John Trefry

Alaska OCS Region

Dr. Smith introduced two studies that the Alaska OCS Region is considering.

- *COMIDA - Chemical Monitoring:*
 - definite need for sediment chemical monitoring for environmental decision-making,
 - possible advantages from conducting part of the sampling in each two different years,
 - consider shift in strategy that optimizes use of duplicate sampling sites during year 1 and year 2,
 - Consider use of sediment cores, chemical normalization techniques, and lessons learned during year 1 in year 2 plan.
 - Recommend overlap in chemical and benthic biological sampling sites.
 - ensure coordination between benthic and chemical sampling in COMIDA projects,
 - support use of one vessel for sampling for both programs to maximize synergies,
 - include conductivity/temperature/depth and current profiles at sampling stations to get basic physical condition information, and
 - stay connected with other regional research efforts.
- *North Aleutian Basin Circulation Modeling Phase II:*
 - aimed at improving ability to forecast movement of spilled oil,
 - Phase I (now in procurement) study to provide modeling for pre-leasing oil spill risk analysis, and
 - Phase II model improvements available by 2011 for use in development planning or for next 5-year plan.
 - Recommendations:
 - Considering incompleteness of field programs to collect physical oceanographic data, recommend reduced priority for this project until Phase I completed.
 - Resourcing Phase II work in future planning cycles with a higher priority.

Gulf of Mexico OCS Region

Dr. Smith reported on the following studies:

- Air Quality:
 - commendable efforts to respond proactively to anticipated regulatory changes (e.g., reduced ozone criteria),
 - FY 2008 Plans for meteorological study aimed at improving modeling of phenomena at air-sea interface,
 - concern about apparent lack of plans to include validation efforts in connection with boundary layer data collection study,
 - questions about suitability of offshore platforms for measurements of 10-100m altitude range,
 - suggest consideration of locating a second station farther offshore, and
 - suggest consideration of simultaneous in-air and in-water chemical measurements to validate flux parameterization.
- Physical Oceanography:
 - making good progress on international collaborations,
 - upcoming interactions with Mexico providing potential opportunities,
 - endorse giving MMS staff flexibility to adjust deepwater measurement program to take advantage of synergies of interactions with Mexico programs and to consider recommendations from June workshop, and
 - progress agreement on collaboration with PEMEX deepwater current program but ensure agreements provide for full two-way exchange of information – with optimal access to Mexican data.
 - *Mid-Atlantic Drifter Study*:
 - Support for ambitious program that addresses surface currents and assessment of oil spill risk.
 - Lagrangian sampling depends on flow – fast currents (such as Gulf Stream) limit time domain of data collection and need to be considered.
 - Ensure (perhaps by some direct funding) best use of existing shore based high frequency (HF) surface current mapping and integration with drifter results.
 - *Shore Based HF Radar Coverage* (see separate maps):
 - Recent example of surface current coverage from HF now in place in emerging national network.
 - Maps once per hour.
 - Data collected by various scientists under different funding sources. Need for operational funding (Integrated Ocean Observing System? OOS? Regional OOS? MMS?).
 - Recent example of surface currents from HF now in place (green dots).
 - Maps once per hour.
 - Data collected by various scientists under funding sources.

Open Discussion

Dr. Diaz commented that Dr. Smith made a good point connecting the different chemistry and biology studies. Dr. Smith said it had been discussed that if one of the studies falls off the funding map, consideration should be given as to whether both should be delayed until both can

be funded since in many cases, the chemical measurements may have to be repeated in order to be able to interpret what you get from the biology studies.

Social Economics Discipline Breakout Group

Members: Drs. Tyler Priest, Ralph Brown, and Peter Schweitzer

Dr. Priest reported on the working group members' general recommendations:

- appoint an economist to the Committee and
- if alternative energy becomes viable in the Pacific Region, revive the socioeconomic studies program there.

Gulf of Mexico OCS Region

Shipwrecks:

- *DARE II* – FY 2008.
 - The working group members support follow up to the successful DARE I study.
 - Consider ways to coordinate this study with the Spanish shipwreck study.
- *Investigation for Potential Spanish Shipwrecks in Ultra Deepwater* – FY 2009.
 - MMS should maximize opportunities for multidisciplinary collaboration; study has cultural heritage value.
 - MMS could approach others (e.g., PBS, National Geographic, Mexican and Spanish governments) for additional support for this study.
- *Continued Monitoring of Industry Compliance, Biological Sampling, and National Register of Historic Places Evaluations of Submerged Sites on the Atlantic Outer Continental Shelf* – FY 2009.
 - MMS should consider conducting similar monitoring in the Gulf of Mexico as well.

Proposed FY 2008 Studies:

- *Ethnic Groups and Enclaves Affected by OCS Activities.*
 - A baseline inventory of ethnic groups and enclaves is needed.
 - Study needs further definition of geographic boundaries and groups in order to keep the study manageable.
 - Study could build on and enhance the shipyard and fabrication study.
 - Set up a matrix to collate the data as an organizing scheme; develop a relational data base that could be used for other purposes to draw linkages that could then be used for other purposes.
 - Develop a basis of comparison to other studies that consider communities either by geopolitical boundaries or labor markets.
- *Deepwater Platforms from Plan to Production*
 - The study has the potential to demonstrate the geographically dispersed economic and employment impacts of deepwater development.
 - The working group members have concerns about feasibility.
 - Preliminary discussions with industry should be pursued before moving forward with this study.
 - The study is primarily descriptive; analytical benefits need to be better defined.
 - How will the two projects be selected and how those chosen relate to others?

- *History of Gulf of Mexico Offshore Petroleum Industry, Phase III: Deepwater Developments.*
 - There is a sense of urgency to complete this study because of the aging population of potential interviewees.
 - The issue of the historical timeframe for the deepwater study and the target group for the interviewees need to be resolved.
 - The study adds to regional and national cultural heritage.
 - The working group members encourage the MMS to consider a Phase IV of this study – the history of the MMS.

Proposed FY 2009 Studies:

- *Alternative Energy Project Scenarios and Local Community Issues.*
 - It is advisable to begin collecting information on capital and labor inputs into alternative energy projects.
 - The methodology of collecting data on community attitudes still needs to be established, i.e., “not in my backyard”.
 - Wait until the geographic areas of interest are defined by the Alternative Energy workshop.
 - Consult with community leaders (e.g., economic development agencies, Chambers of Commerce) to identify possible projects.
- *Gulf Coast Communities and the Offshore Petroleum Industry: A Comparative Community Study.*
 - Consult with community leaders (e.g., economic development agencies, Chambers of Commerce) to identify possible projects.
 - Necessary to conduct social impact assessment research at local-level; can build on many previous studies.
 - Opportunity to combine/integrate with the urban community study.
- *Socioeconomic Effects of the Offshore Petroleum Industry on Urban Communities.*
 - Timeframe of the study needs to be established.
 - Caution about the problem of separating hurricane effects from offshore industry effects is needed.
- *Understanding Current and Projected Gulf OCS Labor Needs.*
 - The working group members have concerns about the feasibility of obtaining company information.

Economic Modeling Studies.

MAG-PLAN.

- *Testing New Gulf of Mexico Data, and Mid-Atlantic Oil and Gas Module for MMS Alaska-Gulf of Mexico Modeling Using IMPLAN (Impact Analysis for Planning) (MAG-PLAN)*
- *Testing, Improvement, and New Alaska Data for MAG-PLAN.*

Alaska OCS Region

Proposed FY 2008 Studies:

- *COMIDA: Impact Monitoring for Offshore Subsistence Hunting.*
 - Before an SOW is developed, there needs to be collaboration with local communities in defining impact issues.

- The study should be a priority because of upcoming Sale 193, and the bureau needs to begin working on environmental impact assessment.
- Would linking with the Wainwright study help more than following the cANIMIDA model?
- Can Global Positioning System data be collected for this study since there are more species than the Bowhead whale and spatial information about animals may be proprietary?
- *Subsistence Study for North Aleutian Basin, Phase I.*
 - This is an important study in preparation for the 2009 and 2011 lease sales. There is limited information available and it is a complex area.
- *Aggregate Effects Research and Environmental Mitigation Monitoring of Oil Operations in the Vicinity of Nuiqsut.*
 - General comment: COMIDA subsistence hunting and NAB are important baseline studies, but this study has great potential for informing future studies.
 - The study was strongly endorsed previously because it could inform best practices for mitigation strategies for other regions. The Committee continues to endorse this study. However, it needs the cooperation of other agencies.

Open Discussion

Dr. Castellini noted the differences in scale of OCS activities in the Gulf of Mexico and Alaska and asked whether there are other activities in the Gulf that contribute to impacts or if everything else is just noise. He also asked how one separates OCS impacts from other impacts. Dr. Priest replied that is the big dilemma for developed regions. It is difficult to measure the cumulative impact of offshore activities because the industry has long been established in this region. This is especially true for urban regions like New Orleans and Houston.

Dr. Castellini commented that in Alaska, a major OCS activity off Wainwright is significant but that one might never be able to measure the impacts of three or four more ships being built in Louisiana for non-OCS activities. He said he is trying to figure out how to deal with that. Dr. Priest said that there are good records about when and where ships are built and that the problem of ships built for OCS vs. non-OCS activities is one of the issues being tackled in the ongoing shipbuilding and fabrication study. He agreed that shipyards are not building vessels purely for the offshore oil and gas industry, but for all sorts of activities. It is noise and it is significant. Shipyard activities affect the whole economy and that really poses difficulties for social scientists.

Dr. Schweitzer commented that there had been a short discussion about the history of OCS development in the Gulf of Mexico and that he thought there had been good discussion about why there isn't something similar for Alaska. The history of the oil and gas industry is fairly well known; but, the issue of how many people are affected is not as well understood. Even a small amount of development off the shore of Wainwright will have tremendous effects on small communities.

Mr. Tim Holder explained that from what he's been able to gather from the socioeconomic studies and the state of the economy in the Gulf Region, quite a few rural parishes and counties and many of the parishes in Louisiana have a very high proportion of employment in OCS-

related industries. One can't tell variations among the parishes and counties, but even with New Orleans and Houston, significant portions of the economy that are connected with the OCS. Dr. Priest said that there had been a discussion about the urban effects that came right after Hurricane Katrina when several thousand displaced people from New Orleans relocated to Houston. People started to think that it is not just the local areas adjacent to OCS activities that are affected, but that urban areas are affected as well. He indicated that everyone recognizes that it is going to be very difficult to draw definitive conclusions about the impact of OCS activities on the urban areas. Dr. Brown added that part of the ability to draw conclusions about OCS impacts on urban areas will be creating a methodology that will allow us to assess urban areas. The impact assessment on communities has predominantly been in rural areas partially because the assumption has always been that a massive amount of people moving into a small town overly burdens its infrastructure and that has all types of cascading effects. There have been some preliminary studies that go back to the 1970s on Houston and some other areas, that rely far more on historical analysis and the social impact analysis, but a study on the impacts of OCS activities on urban areas would actually be rather pioneering if not in what it finds, but what it creates in terms of a methodological approach to try to address something much larger than the rural areas.

Dr. Brown added that another part of the discussion was additional connections to the other disciplines, using the Spanish shipwreck study as an example. One of the arguments was to go back and look at very well documented archival data from where these Spanish ships were actually sailing and if it could be mapped out over time, then there would be an opportunity to perhaps look at shifts in current patterns over time. Perhaps that could even lead to a discussion about climate changes over time. If we could further document where we think the ships might be on the bottom of the ocean, and if their location matched nicely with the archival data of when they were sailing, we might actually get a pretty good sense over a couple hundred year period of time where those shipping lanes were, based on the currents.

Dr. Smith commented that shipwrecks, especially the more modern ones, are good laboratory sites to understand the long term effects of putting large underwater structures on the seabed, which is one of the concerns regarding decommissioning. Also, with respect to the deepwater platform and plan production study, he agreed that information will be difficult to get. Certainly, discussions with potential companies that could provide information for the study are the first order of business. He stated that his first thought was the potential reaction he would get from his boss when his boss was presented with the list of information that would need to be released for this study. Dr. Priest agreed and stated he understood that there have been some discussions with the American Petroleum Institute about coordinating efforts. While that was reassuring, it is still unclear how easy it would be to gather the information.

Open Discussion of Discipline Breakout Group Reports

Dr. Brown said as a newcomer to the Committee, he was curious if there has been any kind of discussion about assessing the linkages across these data over time that have already been gathered and done in a very deliberate and systematic fashion. Dr. Diaz replied that there were several studies proposed in the package from different regions to do some of this, looking at past data, particularly the physical oceanography groups. Dr. Brown suggested that there may be some merit in identifying indicators that are recognizable and valid that would allow a very

direct accountability over time as these studies progress. If you can measure a concept or a phenomena with a variety of different ways, and there are one or two ways that everyone could agree upon, it would certainly make for a far better comparability over time.

Dr. Castellini stated that one of the issues he deals with is marine mammals and acoustics, and that he wanted to re-visit and clarify for the Committee the discussion on the Gulf of Mexico retrospective study on marine mammals and acoustic. During the afternoon break, he said that there was a discussion of how much seismic activity can or cannot impact marine mammals, and he wanted to make sure that when the supplemental report is written on that particular case, it needs to be stressed that we were exclusively discussing: a) the Gulf of Mexico, and b) the suite of animals in the Gulf of Mexico primarily whales that are called odontoseisis, toothed whales that have a different type of acoustic world available to them than do the balean whales. Each has different acoustic environments that they live with and he wanted to make sure that discussions are confined to the particular case of the Gulf. This does not imply that other discussions about impact and seismic activities on other marine mammals is not important, but are unrelated issues in this case. There was some concern that seismic activities impact these animals, impacts may be different in different regions, and different animals have different responses. In the particular case of the Gulf of Mexico and with this particular study, he wanted to make certain that this was understood.

Dr. Diaz gave a brief summary of the key points that came out of the regions and the disciplines:

- 1) There just isn't enough funding to do everything that needs to be done in terms of the MMS mission. The MMS needs to look at other options that can be followed for getting additional funding from other agencies.
- 2) Related to funding, there is a need to get the best synergy in terms of science and cost savings in terms of combining field work for the disciplines - the most obvious being chemistry and biology and for sampling designs to be efficiently developed so that the efficiency translates over to efficiency in spending of dollars.
- 3) The affect of climate and how that is going to interact with oil and gas activities in the planning areas, in both positive and negative ways needs to be considered.
- 4) There is a movement for some of the studies to go into broader ecosystem base looking at management of the biological resources, physics, social science, and political economics as well.
- 5) Seismic issues. The affect of seismic or other sound on marine mammals is not going to diminish in the future.
- 6) The connection of the MMS studies with other studies that are being funded in these same or adjacent areas need to be incorporated. A lot of money is being spent in the Gulf and other oceans by other Federal agencies and the MMS needs to take advantage of any information that is within the planning areas or applicable to the planning areas. Also,

MMS needs to keep in mind all of the work that it has done in the past and look at those common factors that have been measured several times in the same areas.

Dr. Smith commented that during the presentation on alternative energy, the element of working to achieve public acceptance of these facilities was missing and he believes that is going to be a key item that will need to be addressed. Dr. Brown agreed and added in particular regard to the Pacific, there is no socioeconomic presence at the moment and he believes that it will be the biggest issue in terms of selling these structures and their presence offshore. Dr. Priest echoed Dr. Brown's comment and said that he wants to see a little bit more specific methodology about how to measure local attitudes toward alternate energy. Dr. Piltz, in speaking for Ms. Bornholdt, said that the program doesn't want to get out ahead of the public's opinion and is certainly actively and pro-actively seeking public input through a variety of workshops that have been held. He spoke only to the future potential for alternative energy on the Pacific Coast stating that, as the DOI's Co-Lead on the West Coast Alliance, he has been charged to make sure that all three states on the Pacific Coast work together to develop an action plan that will ensure that there is public participation and that MMS is not ahead of what the public and the States want to see with regard to alternative energy, the options, and the information needs from public concerns. He added that Dr. Maurice Hill, Pacific OCS Region, is working closely with State representatives in putting together a North West Task Force that would aid in addressing this issue.

Dr. Diaz asked Mr. Cimato to review both the recommendations by and responses to the Committee from last year.

Mr. Cimato reported that one issue, the alternative energy program, has already been discussed.

Another issue was again to consider archiving MMS supported data in a manner that would keep it accessible and that MMS should keep and manage its own data archive. Mr. Cimato said that MMS data, policies, and response to this issue was that we will make no pretense to replicate in any way the service that National Oceanographic Data Center (NODC) provides for the archiving of federal research data. What we do is make sure that our data becomes available through publications that we sponsor, through posting information on web sites, and through the data mining efforts that we sponsor.

Dr. Trefry commented that he feels MMS has a long way to go in getting all of the data in an accessible form. It is recognized that some information is sensitive; however, there is a continuance to have a dilemma of the massive amounts of data that MMS has generated. He recommended that MMS try again to see what can be done. Going back and looking at 20-30 years of data that are out there, in some cases, is difficult. Mr. Cimato agreed and added that he'd raise the question about the value of older data sets. The analytical methodology has evolved tremendously over the decades; however, he did agree that there is a need to look at old data, but there are funding constraints. He added that solutions are welcome. Dr. Diaz mentioned that he believes some of the regions are producing CDs of reports and also making them available on the web. He said that is a really good first step from here into the future. Dr. Piltz, as an example, reported that the MARINe program has a public web site where there are some data and then there's a password-protected web site where there are other data.

Dr. Trefry agreed that the last 10 years has seen incredible improvement, but said that he had meant all of the data. Dr. Kosro stated that he has been very impressed with MMS's use of the web for distributing reports and feels it is a tremendous service. He suggested that the data on the MMS website be linked to data storage systems such as NODC. Mr. Cimato agreed and said that was a very good idea. Dr. Smith said that the NODC is a black hole and it is very difficult for someone who doesn't know exactly where to look to find something in that black hole. He suggested there be a link on the cover of the report or something inside the environmental study information.

Mr. Cimato said the next recommendation dealt with the DOI LNG guidelines for peer review. He stated that Ms. Burkhard had covered this topic and it is moving along.

The next recommendation of the Committee encouraged the MMS to seek additional funding for our various programs. Mr. Cimato said there is certainly more that can be done to have a more complete program with some budget enhancing, but we do the best we can with what we have. Certainly, he said, the NOPP engagement that MMS has had over the last 5, 6, or 7 years has been one helpful component, as with the contribution from USGS Biological Resources Division (BRD) helps us get our job done. We work very hard and continue to work with USGS BRD to ensure that they will continue to provide us with some of the work that we need. The MMS is also moving in a direction to talk about the possibility of changing the appropriation language so that MMS could receive donations and contributions from private entities to further some of the work that we are trying to accomplish. He explained that the intent right now is to attempt to modify our FY 2008 appropriation language to clarify whether or not MMS can receive contributions from the outside. If it goes forward, that will be a new way for us to enhance the budget and do more of the things that we believe would be useful for the program. This year, MMS began to use grants.gov as a portal and it did, indeed, broaden the reach of our program.

We started receiving phone calls from universities up and down the coast expressing interest, wanting to know more about our program and how those universities could get more involved. Dr. Trefry commented that he applauds MMS on its progress and agrees that grants.gov is a great tool. He would like something done similar to the COMIDA project where each item is identified separately so that it may attract more people to write a proposal on a separate section. Mr. Cimato agreed and appreciated his comment.

The next comment referenced activity with the NOPP and that it serves as an encouragement to continue using that organization. It has demonstrated to be a fair and very good plan, and it has been attributable in many ways to the vision and leadership that Dr. Kendall has shown us.

The next comment is encouragement to provide baseline data over entire regions. He pointed out that MMS has responded to this with the activities that have been developing in Alaska, particularly the NAB and the Chukchi Sea areas. As activities in the Atlantic Region are developed, a similar approach will be used.

Acoustic and seismic effects, which have been discussed over the last day or two, were identified as continuing issues and our response to that comment identifies the work that has been done with Swiss in the past as well as the NOPP work that we are going to be co-sponsoring this year.

The final comment dealt with developments in the Arctic and Gulf of Mexico regions relative to how climate change, knowledge, and data collection activities will come together. Mr. Cimato said that the DOI recognizes that all of the activities MMS is involved in are being reviewed to take into account and consider what shifts in management policies, what shifts in land use policies, what new research needs to be re-directed or focused to take into account and address the climate change issues; it is definitely something that is receiving the highest level of attention through the Interior and within MMS.

Public Comment

There was no public comment during the public comment period.

Committee Business

The committee then went into its business session and developed the following acknowledgments and recommendations for the Director of MMS:

- The committee unanimously expressed its overall high regard for the personnel and programs of Headquarters and the Regions. We continue to appreciate the materials provided to us before the meeting, including the clear and concise responses to the recommendations made the previous year.
- We commend MMS for significant progress on international work with Mexico. This cooperation strengthens ESP studies and increases the visibility of MMS contributions and their science value.
- The high level of communication within MMS, particularly at the regional level, has led to solid cooperation and information flow. The Regions are to be commended in their continuing cooperative efforts.
- We support the effort MMS has spent on keeping its Internet site current and informative. This has positive results as the Internet is a critical portal for communicating with scientists, the public, and policy makers.
- The Gulf of Mexico Region deserves special recognition for the work its dedicated staff put in to recover so quickly after the 2005 hurricane season and maintain its high level of activity.

As a result of this year's deliberations, the following recommendations emerged:

- 1) **Data availability and archiving.** Continue working to make MMS data available via MMS web sites and links to data storage systems (e.g. NODC). This will require continual effort and innovation as the magnitude of data increases; however, it is also of great importance to allow integrated research across disciplines as ecosystem modeling and climate change become critical areas of investigation.
- 2) **Collaborative funding.** Support for continued progress and success in collaborative funding across agencies (e.g. NOPP). Also suggest that methods for matched funding and cross funding with Agency-Industry programs be expanded. Explore innovative pathways for industry to contribute to research efforts.
- 3) **Rapid response to alternative energy research needs.** Research in alternative energy is a nascent field and is driven by rapidly changing business opportunities and economics. The MMS research program has evolved to work best with oil and gas, which is a mature

industry that does not move as quickly and does not have as many smaller entities trying to break into the area of energy production. The MMS research program needs a rapid response component to research concepts and permits in alternative energy in order to keep up with this field.

- 4) **Ecosystem based research and enhanced interactions between MMS Regions.** The MMS should continue to support and enhance ecosystem based research approaches in order to better understand scientific issues in their geographical regions. Regions are moving in this direction and this research needs to be supported, reinforced, and rewarded. It is important that MMS regional programs increase interactions with one another to enhance transferable research lessons, findings, and data.
- 5) **Re-establish sand and gravel research program.** The Committee was concerned that while the regulatory aspects of permitting for sand and gravel continue, research oversight has been significantly reduced. Consequently, there is minimal cohesive and external review oversight of the environmental impacts of sand and gravel activities. This program should be returned to MMS ESP with adequate funding for its mission.

There is growing concern about the relationships of OCS activities and wetland submergence in the Gulf of Mexico Region. The Committee requests a focused presentation on this issue at its spring 2008 meeting.

Dates and Locations for the Next Meeting

After discussion, Dr. Diaz reported that the Committee would like the meeting next year in April in Anchorage since there is a lot of activity there. Mr. Cimato concurred saying it might be a good opportunity to see how some of the other programs are progressing. Dr. Castellini mentioned that the North Pacific Research Board has offices in Anchorage and the Marine Advisory Program through the Alaska Sea Grant has workshops on topics such as the Ocean Basin. He thought the Committee may be interested in a report from them. He added that there is so much centered in Anchorage that, not only with the industry side or from different agencies involved in the research, it might be interesting to hear reports from them. Mr. Cimato said that it would also give the University of Alaska Fairbanks an opportunity to give an update to the Committee on its CMI.

Dr. Diaz adjourned the meeting.