Biology and Ecology Discipline Breakout

We discussed 15 biology profiles

Chukchi Acoustic, Oceanography and Zooplankton Study: Hanna Shoal (Extension of CHAOZ)

- Answers Important Questions – Responsive to decision needs.
- Leverages other studies/build on Previous Work (NOAA)
- Uses proven methods

Walrus Seasonal Distribution and Habitat Use in the Eastern Chukchi Sea

- Techniques adequate.
- Profound advantage of long-term study
- Evidence that Walrus behaviors/distributions have changed – supports need for study
- Good partnership with USGS
- Important for leasing decisions

Alaska - General

- Both valuable studies, relatively equally ranked
- There is a general need for Arctic benthic habitat characterization prior to leasing
- Use current Cook Inlet energy development in state waters to develop study plans for future research
- Consider integrating oceanographic work from different projects such as the existing interdisciplinary studies (e.g. to investigate larval connectivity)
- Encourage international collaboration in the region

Headquarters

Expanded Nation–Wide Scope for Archiving for Archiving of Outer Continental Shelf Invertebrates by the Smithsonian National Museum of Natural History

- Important project to continue.
- Should be including DNA archiving in the future.
- Would be very valuable to coordinate databases with the California Academy of Sciences MMS materials (Arctic OCSEAP) (may need financial support) – Useful to detect change
- Explore collaboration with NIST in archiving for environmental speciment bank (contaminant analysis)

Sediment Character Modification During Dredging, Pump-Out and Placement

- Interesting project
- Encourage collaboration with USACE to reduce cost

Effectiveness of Exclusion Zones Designed to Protect Archaeological and Benthic Resources from Indirect Dredging Impact

- Lab component not representative of field conditions
- Meta-analysis from dredging impact literature may be useful
- Consider effect of Liberty project on Alaska kelp beds
- Recommend not funding

Gulf of Mexico - General

- Encourage region to utilize NRDA data
- Consider multiagency workshop to integrate outcomes of oil spill research and develop future research directions for the Gulf of Mexico
- Consider future study of interactions of seasonal hypoxia with BOEM activities
  - Decommissioning site selection
  - Well drilling and cutting (oxygen minimum layer)
  - hypoxia effect on oil spill recovery rates
  - Acidification accompanies hypoxia – use to further knowledge

(BSEE) Pressure Wave and Acoustic Properties Generated by the Explosive Removal of Offshore Structures: Potential Effects on Protected Species

- Responsive to immediate decision needs, concur with high ranking
- Recommend expand study impacts to other ecosystem components including fish
- Consider how results can be applied to other regions (i.e. Pacific and ice [Arctic] environments)

Pelagic Sargassum Algae Distribution and Movement in the Gulf of Mexico.

- Important study of a critical nursery habitat
- An analysis of the sargassum community should be included as a component of this study to make it more applicable for decision making
- Consider accuracy and drawbacks of optical sensors to map Sargassum.
- Include Sargassum sinking in biomass budget

Deepwater Coral Atlas and Modeling Program: Gulf of Mexico

- Encourage characterization of all habitats associated with structure
- Good synergistic study, relatively low cost
- Effective federal partnering
- Focus on coral integration first, funds insufficient for complete synthesis of all environments
- Highlight vulnerable sea floor areas for avoidance/protection

Florida Manatee Movement and Habitat Use in the Northern Gulf of Mexico

- High Priority
- Good leveraging of funds
- Possible integration with Big Bend Seagrass Study (FY 2014)
- Potential for public outreach
- Collection of samples for baseline health assessment and contaminants is a very important component.

Atlantic

Fishery Physical Habitat and Epibenthic Invertebrate Baseline Data Collection

- General goals (sea floor characterization) is important!
- Method does not effectively answer research question
- Study was too diffuse - should occur after good maps (e.g. multibeam maps) of the seafloor are created
- Be sure to use existing multi-beam data
- We do not recommend funding in this form
- Recommend new proposal to gather maps, trawler snag data and design a more targeted ROV survey

Integrative Statistical Modeling and Predictive Mapping of Seabird Distribution and Abundance on the Atlantic OCS

- Approach makes sense
- Collection of new data will be needed to evaluate models (which are based on older data).
- Coordinate with Pacific Region avian modeling project

Pilot Study: Tracking Offshore Occurrence of Common Terns and American Oyster Catchers

- Tagging technique may not answer question
- Potentially add GPS/Satellite tracking
  - Increase range
  - Provide flight heights
- Link risk analysis framework explicitly with study (e.g. collision, flight heights, displacement)

Atlantic – General Comments

Encourage proactive studies dealing with renewable energy (continue) - Rather than reactive

Develop risk assessment procedures that are appropriate for renewable energy

- draw on European experience
- build baseline in advance of construction
- create feedback loop to incorporate what we are learning to test validity of risk models
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Pacific

Data Synthesis and High-Resolution Predictive Modeling of Avian Marine Spatial Distributions in the Pacific OCS

- Recommend not funding in present form.
- Study by Nur et al. 2011 undertook what appears to be a very similar analysis to that proposed here. (ID of seabird hotspots based on oceanographic variables)
- Please recast project to build on their results

Habitat Affinities and At-Sea Ranging Behaviors among Main Hawaiian Island Seabirds

- Recommend support
- Be sure to integrate past and ongoing work by other agencies
- Consider interannual differences and changing climate (ENSO etc.)

Platform Impacts on Seafloor Communities in Southern California

- Recommend funding
  - One year of field of collections, 2 years of data analysis
- Effective, coordinated with SCWRRP and other sanitation districts
- Needed for NEPA analysis and conventional energy development
- Academic interest
- Points to broader issue of standardizing platform impact assessment across regions, especially for new drilling activities, platforms

Pacific - General Comments

- Elevate HI avian study
- Recommend greater consideration of climate change (acidification and deoxygenation) in project design. Link to monitoring networks.
- Coordinate benthic sampling methods with other OCS project
- Is there sufficient marine mammal data for siting of wind & wave energy facilities?