

APPENDIX XXI

DEPARTMENT OF THE NAVY
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Ser 7000/129

20 June 95

Dr. Christopher N.K. Mooers
Rosenstiel School of Marine and Atmospheric Science
Ocean Pollution Research Center, MSC 132
4600 Rickenbacker Causeway
Miami FL 33149-1098

Dear Dr. Mooers,

In reply to your letter of 25 May, I am happy to provide you information on the Naval Research Laboratory's plans in littoral/coastal ocean research. In response to the Navy shift to the littoral, NRL programs in littoral/coastal oceanography and meteorology have grown to greater than half of our total program. The coastal research program encompasses several related disciplines in oceanography, marine geology, underwater acoustics, meteorology and remote sensing.

Our research in littoral/coastal oceanography has three major thrusts. The first is to understand the physical, optical and biological processes in shallow and semi-enclosed seas, and the exchange processes between these areas and the deep ocean in order to develop predictive models for these areas. We are also interested in understanding and characterizing the geology and geophysics of the near shore and shelf region and its temporal/spacial evolution. Finally, we are performing research on acoustics propagation and scattering on the shelf and semi-enclosed seas. The field research for these programs is conducted primarily along the East and Gulf coasts of the United States, with additional work being done along the West coast and overseas.

The annual platform use is currently 200 ship days and 225 aircraft hours spread over the disciplines listed above. This platform use is expected to be maintained through the time frame of interest to you but will vary depending on the amount of funding available to conduct research.

With ONR's fleet plan and NSF's refit of their ships I find the state of the UNOLS RV's generally excellent. One wish I have is that UNOLS would provide greater emphasis/incentive to use the larger vessels and associated technology, e.g. with ROV's/AUV's in littoral/coastal research. This would encourage not only interdisciplinary research but also major coastal efforts requiring this scale of vessel.

I deeply appreciate this opportunity to comment on the UNOLS fleet. I am extremely interested in maintaining a healthy and robust research fleet for the U.S. ocean sciences community. These are required assets if the U.S. is to remain at the forefront of the field. I hope this first-cut "helps the FIC in developing its report and I look forward to seeing the 'draft'."

Sincerely,

(Signed)

Eric O. Harturg

United States Department of the Interior
MINERALS MANAGEMENT SERVICE
WASHINGTON, D.C. 20460

JUL 12, 1995

Professor Christopher N.K. Mooers
Rosentiel School of Marine and
Atmospheric Science
Ocean Pollution Research Center,
MSC 132
4600 Rickenbacker Causeway
Miami, Florida 33149-1098

Dear Professor Moorers:

This is in response to your letter of May 25, 1995, soliciting input to the UNOLS Fleet Improvement Committee for long range planning for coastal ocean research vessels.

The Minerals Management Service (MMS) is a member of the Federal Oceanographic Fleet Coordination Council (FOFCC). The members of the FOFCC include many federal agencies that operate and use research and survey vessels. You may already be aware that the coordination board of the FOFCC meets regularly to identify agency needs, to exchange and monitor Fleet schedules, and to integrate ship utilization. The board publishes a Fleet status report which includes: (1) an overall Fleet capability and assessment; (2) an overview of past usage; and (3) a summary of future requirements.

The current issue of the Fleet report is in preparation and will be published in late 1995. Each agency has submitted its updated information to the coordination board. You can obtain a lot of 'first cut' information on future Fleet requirements by contacting board co-chairmen: Dr. Pat Dennis and Capt. R.T. Schnoor at (202) 653-1295.

I am enclosing information (Attachment 1) which describes general themes within the Environmental Studies Program (ESP). Because the ESP is designed to be flexible and responsive to changing OCS program needs, it is difficult to provide specific information regarding time frames and funding levels, and major field experiments, etc. Additionally, because we contract our research requirements out, the vessel requirements are met by the contractor and the planning horizon is typically one to five years rather than five to ten years.

As indicated in the attachment, our geographic areas of interest will focus on the Gulf of Mexico OCS Region, Southern California OCS Region, and the Beaufort Sea and Cook Inlet areas of the Alaska OCS Region. We have no 'major' field experiments planned at this time. However, we plan to have several smaller integrated field studies in the areas mentioned above.

If you need further information, please call me at (703) 787-1726 or call Dr. Ron Lai at (703) 787-1714.

Sincerely,

(Signed)

Kenneth W. Turgeon
Chief, Environmental Study Branch
Minerals Management Service

Attachment I

Minerals Management Service
FY 1996 Science Priorities for the Environmental Studies Program

Prepared May 5, 1994

Management Needs

The DOI/Minerals Management Service (MMS) Environmental Studies Program (ESP) conducts a wide variety of studies designed to improve knowledge on fundamental physical, chemical and biological processes, ecosystem functioning and inventorying of living marine resources to provide information for management decisions regarding activities associated with management of offshore gas and oil and mineral resources. The priority research described in the following paragraphs is essential to current and planned decision making for offshore leasing, exploration, development and production in the outer continental shelf areas of the United States.

Research Priorities

Fate and Transport of Marine Pollutants

An integrated program designed to provide an understanding of the dynamic processes of the ocean and the features that control the motion of coastal and oceanic waters of the continental shelf is carried out through physical oceanography field programs which are integrated with modeling efforts for oil spill risk analysis. Major efforts will take place in the northern Gulf of Mexico (from Texas to Florida), off the coast of southern California (Southern California Bight), and the Arctic Alaska (Beaufort and Chukchi Seas). Research must continue to develop and refine bioindicators for petroleum in the marine environment in important marine species and elucidation of physical, chemical and biochemical transformation processes for petroleum hydrocarbons. New studies must be initiated to assess potential impacts of OCS related sulfur emissions in the Breton Wilderness Area of Louisiana.

Marine Ecosystems

Major efforts must continue in the Gulf of Mexico to characterize distribution and abundance and particular habitat use for marine mammals and sea turtles with an emphasis on protected species. Additional studies of marine ecosystem processes and function on the northeast Gulf of Mexico continental shelf must be carried out to provide information for decisions related to OCS operations. Additional studies of benthic communities of the northern Gulf of Mexico continental slope, including chemosynthetic communities, will be conducted as offshore industry interest emphasis shifts to deeper water. In addition, studies to document migration, distribution and abundance of whales and selected other species of marine mammals must continue in the Beaufort and Chukchi Seas. Monitoring of seabird colonies to provide a basis for assessing change must occur annually in Alaska.

Long-term monitoring studies are currently underway in the Santa Barbara Channel area which integrate priorities to assess change resulting from OCS activities and carry out research to enhance our understanding of natural variability and the ocean processes that control change. Additional long-term monitoring efforts must be continued in areas of oil and gas development in the central and western Gulf of Mexico. Monitoring the health of coral based communities of the East and West Flower Garden Banks in the Gulf of Mexico will continue as a partnership effort between the MMS and the NOAA Marine Sanctuary Program.

Socioeconomics

Studies of community level impacts, recreation and tourism impacts, fiscal and employment effects, and analysis of other social, political and economic factors related to OCS oil and gas industry activities in southern California are needed. Socioeconomic baseline information in the mature oil development areas of the Gulf of Mexico must be collected and applications must be developed for development in areas of the country that do not have a history of oil development. In Alaska, potential impacts on native Alaskan culture and related subsistence issues will be studied in the context of offshore oil and gas development

activities.

Partnerships

The MMS Environmental Studies Program emphasizes partnerships with States and their universities through MMS Coastal Marine Institutes which have been established in Louisiana and Alaska. A third CMI will be operational in California by FY 1996. A unique aspect of the CMI is the requirement for one to one matching of Federal funds by the recipient to carry out research which supports the most important OCS oil and gas information needs of the MMS and the State. In addition to the CMI's, the MMS utilizes cooperative agreements with other States and universities to accomplish specific projects. MMS also works closely with other Federal agencies using interagency agreements and memoranda of understanding. We are currently working with NBS to establish a basic memorandum of understanding and anticipate developing annual interagency agreements which will specify marine biology projects to be carried out by NBS in support of the MMS OCS program. MMS also has entered into interagency agreements with the Office of Naval Research, NOAA, and DOE (for example) to fund and/or carry out mission related science objectives. Additionally, MMS has entered into partnerships with private sector organizations such as the Marine Spill Response Corporation (MSRC) to meet mutually agreed upon science objectives.

Budget

The FY 1996 budget required to accomplish these priorities is approximately \$20 million. The projected @S budget will be approximately \$14 million.

From: mreeve@nsf.gov
Date: Wed, 12 Jul 95 11:25:09 EST
To: cmooers@rsmas.miami.edu, dheinric@nsf.gov
Subject: Coastal Plans and FIC

Chris - this is in response to your letter to me requesting information on long-range planning for coastal ocean research vessels for FIC.

I have been out of town on extensive travel recently. So I have only recently had a chance to look at your letter asking for coastal ocean research vessels long range planning comments.

I discussed this briefly with Don Heinrichs before he left on a trip. We both feel that, given the unusually high degree of uncertainty regarding funding both for NSF, and in particular other "coastal agencies", trying to provide the kind of detailed responses to your questions which you would undoubtedly prefer would only provide an appearance of precision which would be virtually useless.

The Division of Ocean Sciences has placed interdisciplinary coastal ocean process studies as its number one priority for increased funding in the non-strategic area (i.e. not Global Change) for several years. We have participated with other federal agencies in producing interagency planning documents, as well as community-based COOP plans for well over five years. To date, very little of these efforts have borne fiscal fruit. At present our COOP initiative is about \$3M annually (including ship funds). In order for any major increase in coastal science funding to occur, it will clearly take a major push on the part of interests controlling the Congressional budget process. Your guess is as good as mine as to the likelihood of this occurring over the next seven years of budget balancing, but it is hard to be optimistic. Nevertheless, COOP remains at the center of our "major research themes". Secondly, there are the international (IGPB) Global Change theme of LOICZ and the new IOC International Coral Reef theme.

Interdisciplinary coastal studies call for either larger ships than UNOLS usually operates in the coastal zone, or perhaps smaller ships which are more specialized with state-of-the-art facilities, and operate as two-or-more ship teams. One could envisage a ship primarily designed for rapid site surveying using underway sampling techniques (physical, chemical and biological) and one primarily designed for process and experimental studies (mainly biological/chemical). Either way, a large multi-disciplinary

field program could require 30 - 50 scientists at sea at the same time just as it does for JGOFS ocean field programs. The days when the "ideal" new coastal vessel would look like a CALANUS or BLUEFIN are long gone, in my opinion.

Regarding geographical location, I believe coastal studies are much more likely to be conducted in U.S. coastal waters, because most justifications for coastal programs, particularly in an interagency context, will be in association with U.S. societal problems (fisheries, pollution, habitat, weather prediction etc.). The only major field experiment being talked about now is the desire of COOP to mount a major study in the Great Lakes. GLOBEC has strong interest in a west coast program, but current problems within NOAA mean that the Georges Bank field program cannot be sustained at its desired level over the next several years, and so a new start is not likely soon.

In summary, even in the best of circumstances, the NSF budget is not likely to do more than keep pace with inflation over the next few years. This, combined with the fact that great pressure is being placed on other "coastal agencies" to be drastically cut back, suggests less, rather than more funds available for coastal research.

[Return To Minutes](#)