REQUEST FOR PRE-PROPOSALS
for Research on Environmental, Social and Economic Effects
of Offshore Oil and Gas Production from the

MMS - UC Coastal Marine Institute Program
Pre-Proposal due Date: November 9, 2001

Direct inquiries to: Dr. Jenifer E. Dugan, Deputy Director [(805) 893-2675; j_dugan@lifesci.ucsb.edu]

The Program: The Coastal Marine Institute Program (CMI) is a continuing cooperative research program involving the Minerals Management Service (MMS), State of California and University of California. The CMI funds research projects that improve understanding of long-term social, economic and environmental consequences of Outer Continental Shelf (OCS) oil and gas development, with an emphasis on the Southern California region. More detail can be found on our website: http://www.coastalresearchcenter.ucsb.edu/cmi.

The Opportunity: The CMI is now soliciting PRE-PROPOSALS for research projects on social, economic, or environmental consequences of OCS activities. Proposed projects that address any relevant research topic will be considered (see below). Any researcher with PI status in the UC system is eligible to apply. Projects may be 1 year or longer in duration.

Availability of Funds: We anticipate obligating approximately $750,000 of MMS funds in this cycle.

Cost Share Provision: There is a cost-share requirement of 1:1 for each CMI project; the source of funds to match MMS dollars must come from non-Federal sources such as the State or the private sector.

The Solicitation Process: The funding process involves solicitation of a pre-proposal, followed by a Request for Proposals for proposed projects deemed to be scientifically sound and which address the most important local research needs of MMS. Full proposals are peer-reviewed and funding decisions are made by a Technical Steering Committee composed of MMS and UC scientists.

The Pre-Proposal: The pre-proposal must identify the research issue, its importance to MMS and the State of California, and contain a brief outline of the proposed approach; limit these sections to a total of 2 pages. In addition, provide a preliminary budget (prepared by your Budget Officer), sources and amount of matching funds, and a 1 page CV for each PI. Pre-proposals are due by November 9, 2001 at the address below.

GENERAL RESEARCH AREAS

Proposals on any topic deemed relevant to the information needs of MMS which meet the conceptual goals and contractual requirements of the program will be considered. Below are general areas of research interest.

♦ Social Sciences Research: Studies investigating relationships between OCS and state submerged lands development, tourism and recreation are of particular interest. Examples include: the impacts of offshore energy activities on tourism and recreation; the allocation of those impacts, where are they realized and by whom; and the effectiveness of federal, state, and local mitigation measures. Community and development studies that address such issues as environmental justice, de-industrialization (including decommissioning and rigs-to-reef policy issues), comparisons of the oil industry in different locales, or perceptions of risk from oil industry activities are also appropriate. Other examples include cultural and discourse analysis, studies of cultural change associated with oil industry activity, media analysis of issues related to development of oil resources, and discourse studies on related topics.

♦ Economic Research: Studies that address the potential effects of OCS activities on local economies are appropriate. Examples include studies that use innovative approaches to improve or test economic valuation methods (including the comparison of alternative methods and/or combinations of different methods) to address potential effects of OCS activities (for example, coastal resources at risk, platform decommissioning, oil spills, extended reach technology) on such issues as recreation, aesthetics, or other potential market or non-market effects. Other examples include investigations of local and regional economics that consider the effects of changes in specific economic sectors upon other sectors, and the effects on employment and income at the county level.

♦ Natural Sciences Research: Studies involving marine geology, physical, chemical or biological oceanography; marine ecology, microbiology, genetics, and/or toxicology are appropriate when tied to MMS / State information needs. Examples of topics include: the identification, fate and transport of bioactive compounds, ecological effects of OCS activities, consequences of anthropogenic alteration of coastal habitats, development of restoration and mitigation strategies, and issues related to decommissioning and removal activities.
GENERAL ISSUES OF PARTICULAR INTEREST

Certain issues are of particular interest to MMS and the State because of regional information needs related to ongoing and/or anticipated OCS-related activities in California. Listed below are several of these general issues.

- **Recreation and Tourism:** Delineation and socioeconomic characterization of "beach areas" of Tri-county metropolitan areas - investigations of how the coastal area enhances the quality of life, recreation, and tourism.
- **Environmental Justice:** analysis of Pacific OCS Region development, that is, of the scenarios for future development described in various MMS reports.
- **Decommissioning:** A number of documents contain recommendations for research on decommissioning including the Interagency Decommissioning Working Group Action Plan, University of California Select Scientific Committee on Decommissioning, and the CARE-facilitated workshop on the Ecological Consequences of Decommissioning California's Offshore Oil Platforms. (These documents are available at www.coastalresearchcenter.ucsb.edu/CMI/ as PDF files for researchers to access.) The recommendations include:
  - Assessment of the quality that the range of options for decommission platforms offers for reef habitat, and how that habitat functions in the local and regional context;
  - Identification of criteria and GIS mapping of preclusion zones considered inappropriate for siting of artificial reefs offshore southern California;
  - Platform/pipeline steel corrosion/decomposition rates and environmental consequences;
  - The possible role of platforms in the larger Santa Barbara Channel ecosystem, specifically as unharvested refuges for mobile species;
  - Analysis of impacts that arise from disposition options for OCS shell mounds (continuum of options from leave-in-place to complete removal). Ecological and environmental impacts, role as reefs, refuges, turbidity and toxicity issues associated with disposition options.
- **Platform Ecology:** Trophic interactions associated with platforms need to be investigated. Studies of fishes have found lots of variation among platforms in fish communities and composition. Recent work on invertebrates shows considerable variation among platforms as well. No studies have considered interactions among fishes and invertebrates and the relationship of trophic interactions and other ecological processes to the observed variation. This concept could include marine mammals and seabirds and benthic as well as pelagic forms. Understanding the role of trophic interactions and other potential sources of variation in mobile and sedentary communities among platforms would be valuable in evaluating the ecological role of existing platforms in the Santa Barbara Channel and help in predicting the effects of different decommissioning options in this region.
- **Marine Biotechnology:** The potential value of organisms inhabiting the subtidal structures of offshore production platforms and in the vicinity of natural oil seeps as sources of natural products for pharmaceutical and other potential commercial applications is a new area of interest to MMS. In addition to human health, innovative applications of bio- and eco-technology to address health of coastal ecosystems where OCS activities occur also are welcome. For example, these could involve investigations of the abundance, distribution, and population dynamics of potential target species (e.g., connectivity of local populations; source populations for species associated with offshore platforms) or of the nature and specific action of potential natural products from offshore oil platforms and seep habitats.
- **Produced Water:** Past UC/MMS research has studied the effects of produced water. We would like to receive proposals that identify additional studies that take into account previous research and fully justify new efforts in light of these past studies. A potential research topic of interest is the near field effect of produced water on the environment. This could entail an examination of produced water characteristics, animals that are exposed to the discharge and/or consume animals exposed to the discharge, and aspects of the overall exposure to metals and organics, including relationships between duration of exposure and effects, based on baseline information for discharges and dilution modeling. Other considerations include:
  - Following the techniques used in the previously completed and reported Carpinteria study; outplant mussels or other appropriate organisms and look for barium, other metals and organic uptake;
  - Outplanting larval stages of red abalone or kelp spores, or other sensitive stages of local species that are also used by EPA to determine toxicity;
  - Compare with ambient levels of these components in the ocean and with levels of these components at the "end-of-pipe";
  - Utilize the appropriate model to determine dilution and hindcast the model results with the biological results;
  - Determine fate of produced water components, including metals and hydrocarbons in water column, benthic organisms, and sediments.

**Note:** Approvals of pending EPA permits to discharge produced water are anticipated for late 2001.
SUBMISSION INFORMATION

Where to Submit
Send Pre-Proposals to: Dr. Jenifer E. Dugan, Deputy Director
Marine Science Institute
University of California
Santa Barbara, California 93106
FAX: [805] 893-3777
email: j_dugan@lifesci.ucsb.edu

Deadline for Submission
All Pre-Proposals must be received by 5 p.m., November 9, 2001.

Principal Investigator(s)
Principal Investigator(s) must have PI status with a campus or national laboratory of the University of California.

Student Participation
An intent of the program is to engage students in research that is applicable to decision making. Investigators are encouraged to include undergraduate and especially graduate students in the research.

Start Date
CMI funds are scheduled to be available starting July 1, 2001. Please indicate a desired start date.

Project Duration
Projects extending over several years may be proposed with justification. Multiple year proposals should provide a budget breakdown for each year.

Cost Sharing
There is a 1:1 cost sharing provision for CMI proposals. Cost sharing is on the basis of the total cost of a study. The source of match for MMS funds must be from a non-Federal source, and the same funds cannot also be used to meet matching requirements of other Federal funding agencies. Direct inquiries regarding match to Bonnie Williamson, CMI Program Manager, at [805] 893-2051; email address: b_willia@lifesci.ucsb.edu.

Allowable Costs
The usual Federal procurement restrictions apply to the CMI program. No CMI funds may be used to build facilities, obtain vessels or purchase major capital equipment. Requests for scientific equipment will be considered if fully justified, and must be agreed to by MMS before purchase. Title for equipment purchased with MMS funds vests with the Federal government. OMB rules prohibit the use of Federal funds for questionnaires without prior approval. Funds are subject to indirect costs.

FORMAT FOR PRE-PROPOSALS

Title of Project:

Principal Investigator(s) and Title of Position:

Address:

Project Duration (years): ___________________________ Telephone: __________________
Proposed Start Date: ___________________________ FAX No.: __________________
Total MMS-CMI Funds Requested: _________________ E-mail: ____________________
Total Matching Funds Available _________________

Objective: (provide well-developed statement of problem and motivation for proposed research)

Approach to be Used: (provide concise description of research to be conducted)

Budget: (prepared by administrative unit’s Budget Officer; break down costs by year, see example)

Matching Funds/Cost Share: (explain sources and amounts of matching funds available for this project)

Budget Justification: (explain requests for equipment or other unusual items)
### Example Budget

**Example Budget**

<table>
<thead>
<tr>
<th>SALARIES</th>
<th>First Year</th>
<th>Second Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Per./ %</td>
<td>07/01/2000</td>
</tr>
<tr>
<td></td>
<td>mos. Time</td>
<td>MMS-CMI Match</td>
</tr>
<tr>
<td>1. Principal Investigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic period @ annual rate of</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$57,200 1st yr.</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>$60,060 2nd yr.</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>2. Lab Assistant II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ $2,173/mo. 1st yr.</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>@ $2,249/mo. 1st yr.</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>@ $2,249/mo. 2nd yr.</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>@ $2,328/mo. 2nd yr.</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>3. Graduate Student Researchers - To be named</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ $2,344/mo. 1st yr.</td>
<td>3</td>
<td>49%</td>
</tr>
<tr>
<td>@ $2,391/mo. 1st yr.</td>
<td>9</td>
<td>49%</td>
</tr>
<tr>
<td>@ $2,391/mo. 2nd yr.</td>
<td>9</td>
<td>49%</td>
</tr>
<tr>
<td>@ $2,439/mo. 2nd yr.</td>
<td>9</td>
<td>49%</td>
</tr>
<tr>
<td>@ $2,439/mo. 2nd yr.</td>
<td>9</td>
<td>49%</td>
</tr>
<tr>
<td>4. Undergraduate Assistants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ $7/hr. (100 hrs./ea.) 1st yr.</td>
<td>9</td>
<td>var.</td>
</tr>
<tr>
<td>@ $7/hr. (100 hrs./ea.) 2nd yr.</td>
<td>9</td>
<td>var.</td>
</tr>
<tr>
<td>Salaries Subtotal</td>
<td>13,990</td>
<td>16,780</td>
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**FRINGE BENEFITS**

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<thead>
<tr>
<th>Fringe Benefits</th>
<th>First Year</th>
<th>Second Year</th>
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<tr>
<td></td>
<td>07/01/2000</td>
<td>06/30/2001</td>
</tr>
<tr>
<td>1. Principal Investigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base sum:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2,860 @ 17.0% 1st yr.</td>
<td>486</td>
<td></td>
</tr>
<tr>
<td>$3,003 @ 17.0% 2nd yr.</td>
<td>511</td>
<td></td>
</tr>
<tr>
<td>2. Lab Assistant II</td>
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<td></td>
</tr>
<tr>
<td>Base sum:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$2,676 @ 23.0% 1st yr.</td>
<td>615</td>
<td></td>
</tr>
<tr>
<td>$2,770 @ 23.0% 2nd yr.</td>
<td>637</td>
<td></td>
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<tr>
<td>3. Graduate Student Researchers</td>
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<td></td>
</tr>
<tr>
<td>Base sum:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$3,446 @ 3.0% 1st yr.</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>$10,544 @ 1.4% 1st yr.</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>$10,544 @ 1.4% 1st yr.</td>
<td>148</td>
<td></td>
</tr>
<tr>
<td>$3,515 @ 3.0% 2nd yr.</td>
<td>105</td>
<td></td>
</tr>
<tr>
<td>$10,756 @ 1.4% 2nd yr.</td>
<td>151</td>
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<tr>
<td>$10,756 @ 1.4% 2nd yr.</td>
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<td></td>
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<tr>
<td>4. GSR Health Insurance Benefits</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>942</td>
<td>942</td>
</tr>
<tr>
<td>5. Registration fees for GSR’s</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,946</td>
<td>3,946</td>
</tr>
<tr>
<td>6. Undergraduate Interns</td>
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<td></td>
</tr>
<tr>
<td>Base sum:</td>
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<td></td>
</tr>
<tr>
<td>$700 @ 4.3% 1st yr.</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>$700 @ 4.3% 2nd yr.</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Benefits Subtotal</td>
<td>5,139</td>
<td>6,167</td>
</tr>
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<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SUPPLIES</strong></td>
<td>1,000</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TRAVEL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel to Scientific Conference</td>
<td>600</td>
<td>600</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field travel</td>
<td>400</td>
<td>400</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel Subtotal</td>
<td>1,000</td>
<td>1,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Direct Costs</td>
<td>21,129</td>
<td>22,947</td>
<td>22,239</td>
<td>22,810</td>
</tr>
</tbody>
</table>

**INDIRECT COSTS**

On-campus rate* of Modified Total Direct Costs

<table>
<thead>
<tr>
<th>Base sum</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>$16,241</td>
<td>46%</td>
<td>1st yr.</td>
<td>7,471</td>
<td></td>
</tr>
<tr>
<td>$18,059</td>
<td>46%</td>
<td>1st yr.</td>
<td></td>
<td>8,307</td>
</tr>
<tr>
<td>$17,257</td>
<td>46%</td>
<td>2nd yr.</td>
<td></td>
<td>7,938</td>
</tr>
<tr>
<td>$17,828</td>
<td>46%</td>
<td>2nd yr.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL COSTS</strong></td>
<td>28,600</td>
<td>31,254</td>
<td>30,177</td>
<td>31,011</td>
</tr>
</tbody>
</table>

**TOTAL MMS TWO YEARS**  58,777

**TOTAL MATCH TWO YEARS**  62,265