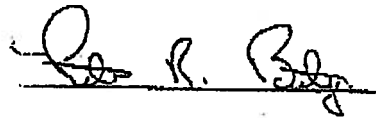


**REPORT OF THE EXTERNAL REVIEW OF
THE LOUISIANA UNIVERSITIES MARINE CONSORTIUM
(LUMCON)**

Submitted to
Louisiana Board of Regents

By the Peer Review Team

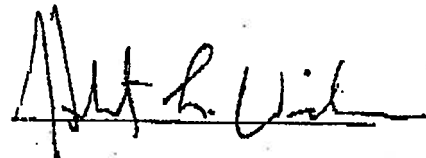
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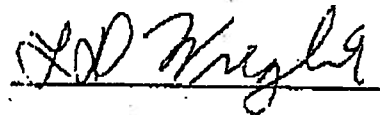
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REPORT OF THE EXTERNAL REVIEW OF THE LOUISIANA UNIVERSITIES MARINE CONSORTIUM

I. EXECUTIVE SUMMARY

A team consisting of Drs. Peter Betzer, Wayne Gardner, Herb Windom and Don Wright conducted the review of The Louisiana Universities Marine Consortium (LUMCON). The review team visited LUMCON October 4-7, 2000. During this time we had discussions with the administration, faculty, staff and students. Our conclusions are summarized as follows:

- The program is valuable, productive, enjoys a good reputation and should be preserved and enhanced.
- LUMCON is viewed in the State as a unique and valuable resource.
- The faculty and staff are talented and committed.
- Students appreciate the LUMCON environment.
- LUMCON's K-12 outreach program is well conceived and executed.
- LUMCON's location is ideal to support field research in coastal Louisiana; however its isolation is probably a detractor to those interested in global studies.
- The R/V Pelican operations are excellent and recognized as such nationally.
- Lab facilities are adequate to support resident LUMCON faculty and ongoing educational activities; however serious concerns were expressed about support for visiting scientists from consortium universities.
- More state support is needed and justified.
- Additional resident faculty members are needed.
- For the graduate education program to function effectively, LUMCON will need to establish firmer and more formal partnerships with participating universities.
- There is dissatisfaction among the faculty of consortium universities with the quality of LUMCON's service; however, without additional state support, external expectations for extensive support from LUMCON are unrealistic.
- Poor internal communications within LUMCON are contributing to low morale; regular town meetings of all staff could help remedy this situation.
- The faculty and staff of LUMCON feel that their groups lack strong and focused leadership.
- LUMCON suffers from not having a strong advocacy to the Board of Regents (BOR) and legislature.
- Although the executive board members that oversee LUMCON's operations are interested in promoting LUMCON's activities, they are disengaged from marine science.
- Collaborations between LUMCON faculty and faculty in Oceanography at LSU and other universities are hampered by several factors; explicit agreements to remove these obstacles need to be brokered by senior administrators.
- The faculty at LUMCON and at stakeholder universities should hold a retreat away from LUMCON to identify and recommend the future focus and missions of LUMCON. This retreat should be implemented before more faculty or research scientists are recruited and before future administrative changes are implemented.
- LUMCON's funding base should be expanded and diversified to include industrial and private development sources.

II. REVIEW PROCESS

The external review team consisted of Peter Betzer, Wayne Gardner, Herb Windom and Don Wright. A detailed and informative document describing the program and its history was provided to each of our team members before the visit. The review team visited LUMCON over the period 4-7 October 2000. During this time we had discussions with the administration, each faculty member, and groups of staff and students. We also had compressed videoconferences with groups of faculty at Nichols State College, University of Louisiana-Lafayette and Louisiana State University. These discussions included group meetings as well as one-on-one exchanges. The meetings were informative; most contributors were objective and candid. It was also apparent from their respective responses that all individuals and groups appreciated the opportunity to express their opinions. The schedule of meetings, attached as Appendix I, was followed closely. This report synthesizes the responses and comments of those we interviewed and considers the written material provided to our team as well as our own familiarity with LUMCON.

III. GENERAL OVERVIEW

Depending upon one's views and expectations of LUMCON, the location may be regarded as the lab's greatest strength or as one of its most serious handicaps. As a coastal field station, LUMCON is ideally situated in the midst of one of the world's most important and complex coastal/estuarine realms. It provides outstanding access for scientists interested in wetlands processes, coastal ocean eutrophication, coastal land loss, river-sea interactions, coastal fisheries and mariculture and other "brown-water" coastal topics. Its functioning in this context is best defined as a supporting component of a consortium of universities with research and educational foci on coastal processes. This is the concept that underpinned LUMCON at its inception and it still seems to be the most appropriate view, especially considering the distributed (as opposed to centralized) nature of Louisiana's marine science talent and resources. To be successful in this function, LUMCON must strive toward internal excellence in all of the endeavors that support these activities. It must provide coordinating leadership for these multidisciplinary efforts.

For those who wish for LUMCON to be a "stand alone" marine institute or a "Woods Hole of the South", its location and organizational situation are wrong. It cannot grant degrees on its own without partnering affiliations with universities. Its isolated location is attractive for scientists seeking to immerse themselves in a rich coastal environment, but unattractive to global oceanographers who seek a stimulating base of operations. LUMCON occupies a special niche in marine sciences and can serve the world well by emphasizing and strengthening that special coastal role. It would be a mistake for it to aim to become a general oceanographic center. As the center of mass for a consortium, it should be a strong, dynamic and excellent hub for distributed university-based marine scientists with a variety of research specialties. The core of excellence that

already exists at LUMCON should be expanded so that it can serve as a magnet to link and focus talents that are distributed throughout the state. LUMCON, as a multi university consortium, needs to develop a vision for itself, focusing on strengths. It must not try to be all things to all people or it will diffuse its resources and become ineffectual.

Unfortunately, the spirit of the "consortium" appears to have eroded over the years, due, in part, to lack of nurturing and centralized advocacy. The dynamic that now exists between LUMCON and its stakeholders seems mired in competing for limited resources and arguing over disciplinary turf. This situation represents a significant impediment to collegial partnerships and is contrary to the best interests of Marine Science in the state. The most straightforward way to fix this flaw is to make more state resources available for marine science in Louisiana and to assign a significant share of those new resources to LUMCON. A mechanism is needed to nurture the feeling of "joint ownership" in LUMCON. The Board of Regents should encourage the development of a system that promotes and rewards collaborations. The original idea of this consortium should be revived and nurtured. Louisiana's coastal marine scientists rank among the best in the world and its coastal problems are formidable. With the necessary focus and support, Louisiana could address its own highly compelling coastal issues and, at the same time, help the rest of the nation and world understand and solve some of their coastal problems. LUMCON is a key element in this search for understandings and solutions.

IV. STATUS OF THE PROGRAM

a. Strengths

- **Reputation-** LUMCON enjoys respect among marine scientists nationally as an eclectic center of coastal marine science. Work by several LUMCON scientists, notably Rabalais and her colleagues, on the Gulf Coast "dead zone", has earned international recognition and has contributed to important legislation (e.g. Snowe-Breaux Bill). LUMCON's focus on river-ocean interactions has also brought it recognition, which places it well for upcoming new initiatives.
- **Quality of Faculty-** The LUMCON faculty is small but talented and reasonably diverse. Several of the faculty are productive with respect to peer-reviewed publications and grant activity. There appears to be a strong commitment to education at all levels (K-12, undergraduate, graduate). Some faculty members are proactive in seeking teaching opportunities on various university campuses and are to be commended for this effort. The quality of faculty members is high. They are self-motivated and meet the standards of respected institutions. All of the faculty members are well connected within the marine science community.
- **Quality of Staff-** The dedicated and skilled support staff of LUMCON are the backbone of the lab. These individuals provide LUMCON faculty as well as visiting scientists with the essential logistic and analytical support that make the lab function effectively. The fact that many of these employees have been at LUMCON for over 10 years speaks well for the staff commitment. Members of this review team who

have utilized LUMCON's field support in the past can attest to the excellence of the vessel operations and field logistics staff.

- **Field location and environment-** LUMCON's location, at Cocodrie, LA in the midst of Louisiana's coastal marsh and near the continental shelf makes it an ideal base or jumping off point for a host of coastal and wetlands studies. It also provides a unique setting for certain types of research that have economic development possibilities (eg. mariculture, natural products, pharmaceuticals).
- **Education Program-** LUMCON has an active and vibrant K-12 outreach program. The graduate students at LUMCON are appreciative of the LUMCON experience and facilities. Through its distance learning capabilities, LUMCON is able to offer high-quality marine science courses to undergraduate students elsewhere in the state. Its location also provides unique opportunities for educational experiences, especially for K-12 programs.
- **Interdisciplinary Approach-** A strength of LUMCON is its interdisciplinary approach to complex, issue-driven questions such as coastal eutrophication and river impacts on coastal seas.
- **R/V Pelican-** The R/V Pelican is recognized as one of LUMCON's most valuable assets. Individuals and institutions conducting coastal marine research in the Gulf of Mexico seek ship time aboard this vessel. The excellence of this platform is attributed to the dedication and competence of the vessel manager, captain, crew and support staff.

b. Issues and Threats

- **Faculty Retention and Morale-** The uncertainty of the future of LUMCON and its eroding relationships with other State institutions affects the morale of the faculty and administration. A flat budget from the State is discouraging and conveys a sense of disinterest in LUMCON.
- **Morale of Research Staff-** The morale of the faculty filters down to the technical staff. In addition there appears to be little interaction and minimal camaraderie between staff and faculty. This is surprising given LUMCON's small size and gives a sense of isolation to the technicians. There are few formal "get-togethers" among staff and faculty, sanctioned and supported by the administration.
- **External expectations and concerns-** Some of the faculty at other institutions expressed the feeling that they should receive more facilities support when they come to LUMCON, such as lab and office space. One faculty member expressed dismay that he and other visitors from consortium universities were unable to have lab or office access during their visits because offices had been assigned to technicians.
- **Funding Level-** State funding makes it increasingly difficult to maintain support functions without diminishing research capability. This, in turn, affects the ability of faculty to attract external support. The "hard-money" state support for LUMCON is appallingly low and this is surely a primary cause of LUMCON's morale and other problems. The level of state funding for LUMCON should be increased.
- **Administration-** The administration does not appear to be engaged in the State budgetary process or to be proactive in seeking new resources. This may be attributable to the dysfunctional nature of the present Executive Board. Further, the

administration has not focused on improving communication among members of the institution, as judged by the faculty and staff.

- **A dysfunctional consortium**-The consortium is not "glued together" by a shared vision or by an engaged Board. Disillusionment with LUMCON on the part of faculty at consortium universities is one side of the problem. On the other side, some LUMCON-based faculty members have difficulty being accepted as teachers or research partners at the universities. This problem appears most acute in cases where LUMCON faculty seek closer ties with LSU.
- **Engagement of Executive Board and Advisory Committee**- The Executive Board is composed of members who are too far removed from the enterprise of marine science. They consist of high-level University Administrators with very limited time and a general lack of appreciation of marine science. The composition of this board should be changed to include LUMCON stakeholders and advocates such as Department Chairs of programs associated with the consortium. The board needs members closer to the action, but with a more global view than individual scientists.
- **Faculty size** - The small size of the faculty at LUMCON limits the critical mass to one person in each general field of expertise and leaves several disciplines critical to coastal science in Louisiana without representation. This situation is undesirable. LUMCON would benefit from having a larger scientific staff to provide a critical mass of colleagues in disciplines relative to the Louisiana coastal environment.
- **Student Concerns**-Because of the lack of communication among researchers within LUMCON, graduate students feel isolated. Also, their remoteness from parent institutions prevents graduate students from having access to student support facilities such as infirmaries, student centers, recreational facilities, etc. For undergraduate students, timing of course offerings at LUMCON in relation to on-campus curricula is of concern as is receiving appropriate credit for courses taken at LUMCON.
- **Support Facilities and Infrastructure**-Access to online journals and literature searches is not available at the LUMCON campus. The LUMCON grounds have the appearance of an unkempt industrial site with little attempt at landscaping. Improving the appearance of the facility would improve the public's impression of LUMCON and enhance its appeal to potential private benefactors.
- **Additional vessel to R/V Pelican**- The Pelican is heavily booked. Several people expressed the view that LUMCON should build another vessel. There is concern regarding how ship needs will be met during the period that the Pelican will be subjected to a needed mid-life refit.

V. RECOMMENDATIONS

At the outset, we emphasize that the LUMCON program at Cocodrie is a viable and important component of the national coastal marine science complex. It is imperative to the state of Louisiana that this laboratory and consortium be maintained and strengthened. We believe that the original idea of the consortium was well conceived and should be preserved. To help the consortium and the Cocodrie program realize their high potential, we offer the following set of recommendations.

a. Strategic Planning and Vision Development

A LUMCON retreat for all LUMCON faculty plus members of the Executive Board and selected faculty from stakeholder universities is needed to set future directions. A scientific vision should be articulated to bring cohesion to the diverse interdisciplinary activities. The retreat should be the first step in the preparation of a strategic plan that will outline educational and research goals for the next decade. A document that describes LUMCON's goals for the next decade, and identifies the resources required to achieve those goals, will serve a variety of purposes, including the recruitment of faculty and students, negotiations with the Board of Regents about resources for the program, and redefinition of the role and purpose of the multi-institutional consortium. This retreat will provide an opportunity for LUMCON (the consortium, not just the lab) to reinvent itself.

b. Identifying Research Foci

Focusing on a few key interdisciplinary topics, such as coastal processes in the Gulf of Mexico, eutrophication, and coastal land loss, could guide planning at the retreat. The Director of LUMCON has identified river-coastal ocean interactions as a potential thrust for future research. This research direction is appropriate considering LUMCON's situation. By establishing such special thrusts, LUMCON could better delineate its particular niches within ocean sciences. The coastal foci have the potential to attract additional initiative funding from the state as well as private contributors. Identification of foci should be an important part of the strategic planning process. It is important that these research foci be developed in collaboration among representatives of the entire consortium with a view toward identifying opportunities for cooperation and needed expertise.

c. Leadership models

LUMCON (the lab) is in need of strong, inspired and altruistic leadership in the form of an executive director who will: 1) aggressively seek and obtain new resources; 2) provide a clear, focused but evolving, and compelling vision of the lab's direction; 3) inspire and motivate the LUMCON faculty and staff; and 4) be proactive in encouraging participation

of other institutions in the consortium in the use of LUMCON facilities. LUMCON (the consortium) is in urgent need of a caring and engaged Executive Board (or Advisory Committee). The director and committee must establish rapport and easy and regular communication. And this administrative structure must enjoy the support of, and a clear line of communication with, The Board of Regents. Chairpersons of departments involved with coastal or marine science programs would be ideal candidates for the Executive Board because they have a strong understanding of marine science issues and also have positions in the administrative structures of the Universities. The board should address structuring such a model in the near future. The Executive Board must act as a strong advocate for LUMCON. This may mean that, from time to time, the interests of one's own institution may be second to the good of the consortium. The committee should also conduct regular performance evaluations of the executive director.

d. Faculty guidance and faculty development

Faculty based at LUMCON must enjoy the same quality of direction, guidance and mentoring as their university-based colleagues. The LUMCON administration must counsel faculty on a regular basis, must set clear expectations at the start of each annual performance cycle and must provide faculty with substantive and helpful feedback at the ends of such cycles.

e. Funding models

If LUMCON is to remain viable, it is imperative that it receive significant increases in state funding. LUMCON and The Board of Regents should work together to seek appropriate models for funding allocations. Proposals for improved funding should be carefully formulated and then promoted within the Louisiana Legislature. The budgets of the universities of the consortium are largely driven by instructional formulae, which legislatures tend to understand. LUMCON's budget, however, is related to research and its applications, which are more difficult to sell. Linking budget to potential for economic growth, or to the sustainability of existing economies may help. At the same time, LUMCON must diversify its funding base to include industry and private philanthropy as well as new federal sources. Proactive leadership will be essential to reach the new funding goals.

f. Development

Large segments of the general public share a fascination and love for coasts and the oceans. Among these are individuals and corporations with considerable philanthropic potential. However, reaching such benefactors and making the LUMCON efforts known to them will require a deliberate and well-orchestrated development campaign as well as public outreach. A development effort, assisted by a volunteer development advisory council should begin soon to seek private expendable and endowment funds. The generation of private funds could provide LUMCON with more fiscal flexibility.

The LUMCON director, with the help of the established volunteer council and selected staff members, should develop a ten-year plan for development that addresses priorities and goals for: (1) an annual fund; (2) endowments; (3) graduate student fellowships; (4) capital and equipment needs; (5) support for faculty development (i.e., research leaves, advanced training, special assignments or projects); and (6) support for international programs and exchanges. It will also be important to enhance individual donor identification, solicitation and stewardship, and improve access to corporate and foundation giving/grants.

g. Links with the Universities: The Consortium

Establishing positive interactions and links among universities involved with LUMCON should be a major task of the Director in collaboration with the Executive Board. The Director will need to "recruit" participation of programs in the consortium into the strategic plan of LUMCON. An atmosphere of trust must be created whereby it is understood that all participants share LUMCON successes.

h. Planning for Facilities and Long-Term Capital Outlay

The strategic planning exercise should help in identifying future facility needs. The process of planning for a new research vessel or building renovations should begin soon so that a capital-outlay proposal to the Board of Regents can be developed with sufficient lead-time.

i. System-wide Communications

LUMCON is probably not known to a large part of the academic community outside the consortium. The State, and therefore other institutions, should view LUMCON as a State resource, available to all, within physical and fiscal constraints. This will require outreach efforts on the part of the LUMCON Director and the Executive Board, but should have a significant political return.

j. Regular Reviews

The Board of Regents should monitor future progress on the part of LUMCON and its administration. This should include substantive annual reviews of the administration by the Executive Board as well as more comprehensive program reviews at three to four year intervals.