

The National Sea Grant Program

A Progress Report

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PUBLIC LAW 89-688 was deliberated by the Congress and passed in October of 1966. In February, 1967, the Office of Sea Grant Programs was created at the National Science Foundation. The goal of our program in brief is to create sales from oceanographic research. It is intended that this will be accomplished via grants to institutions, either for single tasks in research, development and education, or total institutional grants which I'll describe in a few moments. The program has a triple thrust. It can support research and development; it can support education and training; and it can support advisory services of all kinds. An institution desiring to prosecute one or another tasks in any of these three areas may apply for project support. Institutions or colleges desiring to demonstrate total dedication toward development of the oceans may apply for support aimed at all three of these phases which we now title institutional grants and which presumably could eventually lead to the appellation, "Sea Grant College."

While the Congress has, in this Act, given the Executive Branch of government one of the broadest charters ever handed out in federal support programs, as a matter of doctrine we intend to keep to a relatively narrow portion of the research and development spectrum—that of applied research and engineering. To be consistent we would apply the same thesis toward education and training, orienting our educational support to that of engineers, and our training support to that of technicians. Of course advisory and extension services are applied almost by definition.

The reason we confine our aim to this relatively narrow area stems partly from the sense of the Congress as reflected in various hearings and committee reports and partly from our natural reluctance to avoid competition with other groups both within the National Science Foundation and in neighboring agencies such as the Office of Naval Research, Public Health Service, Bureau of Commercial Fisheries, and the like.

The aims, scope, and mechanics of the Sea Grant Program are outlined clearly in the Sea Grant guidance brochure. Accordingly, I'll take refuge in this document and avoid discussing the mechanics of the program.

Several issues have arisen attendant upon administering this program since its inception. First, we find a not surprising but nonetheless slightly alarming tendency or trend among the academic institutions in the United States to aim their research programs toward sources of most obvious funding rather than accentuating their own natural inclinations, interests and capabilities. While of course this is partially to be expected, it is not, I believe, in the interest of the Sea Grant Program to encourage this.

Second, during the original considerations of the Sea Grant concept, there appeared to be considerable fear within the basic research community that

the Sea Grant Program would constitute a drain upon the basic research funds and would partially redirect some of the traditional support of basic research to this innovation.

Certainly, the checks and balances already built into the program preclude this. For one thing, the Sea Grant Program enjoys its own statutory base. It is a separate and distinct act of Congress. As such it enjoys a separate line item in the National Science Foundation budget and could hardly conflict with the program therein. But more important than the rest, is the fact that the Sea Grant Program constitutes the most reasonable and most obvious justification of basic oceanographic research that has ever come down the pike.

Third, response to the announcement of the program has been surprising. In the few months which have passed since the Sea Grant Program was announced to the academic community, about 350 institutions have responded, declaring intent to propose. Well over 800 requests have been received for information useful in preparing Sea Grant requests. Hopefully, certain filters such as cost-sharing requirements will considerably reduce the number of institutions responding, at least the first year, allowing groups more recently entering this arena to examine the Sea Grant situation more thoroughly before preparing proposals.

We have heard from all of the States except Wyoming, Idaho, Montana, and South Dakota. We have also heard from Puerto Rico, Guam, the Virgin Islands, and the District of Columbia; accordingly, it might be said that the Sea Grant response has included 50 of the 50 States. Some of you may wonder what certain of our inland States are doing in the oceanography game. Candor requires the admission that several States far removed from water have already generated some of the freshest and most innovative ideas that we have yet come across.

Fourth, I've mentioned the cost-sharing aspects of the program. The Federal government is permitted to contribute no more than two-thirds of the cost of any Sea Grant Program. The grantee must supply the other third from non-federal sources. We realize as well as anybody else that this is going to constitute difficulty to several potential grantee institutions, but we believe that it is in the best interest of the program's long-range consideration that it be done this way.

It should be pointed out that this is not meant to be a passive program. Congress has indicated clearly that it intends for the administering staff to get its fingers dirty—to go into the field, and encourage development in certain areas where the opportunities appear most evident. I realize that I've just finished stating our concern over the tendency of several institutions to orient their programs where they believe the most abundant support to lie. To be consistent about this, a very fine degree of balance is going to be needed in planning the program's future. We don't want to over-encourage; at the same time we would not want to ignore areas of opportunities as they might arise. In this connection, the balance is further complicated by a need for considering the degree of cooperation necessary from the field. As many of you may have noticed, Federally administered programs closely controlled from Washington sometimes lose cooperation from the field. Accordingly, one would want to avoid over-authoritarian management of this program. At the same time a completely laissez-faire attitude toward the same situation would result in

chaos at the opposite end of the management spectrum. Again, the need for balance.

We have often been asked how to identify the interface between the agencies. That is, where does the Bureau of Commercial Fisheries stop and Sea Grant begin? Clearly, the formula by which such an interface would be delineated can never be derived. We are simply approaching the situation on a personal basis. We have established policy and working arrangements with each of the agencies with whom we would affiliate technologically so that when a situation comes up where a program could go either way I am privileged to call my designated contact in the other agency. If the other agency believes the proposal to be within its purview, Sea Grant no longer considers it. If it falls between the cracks, then it is a subject for Sea Grant consideration.

Regional sensitivity is to be built into the program. While it is not absolutely necessary that schools pay close attention to their own environs, we do prefer that the grantee institutions would at least be aware of local and regional problems and wherever possible, respond to them in some manner.

I would now like to make a few announcements of monumental insignificance. First, we have received to date 40 proposals. About half a dozen of these are institutional, the rest are for project support. This is the batch which was prepared free-style before publication of our guideline brochure. Accordingly, as you might expect, only about a dozen of these were telepathically close to the doctrine as it was explained in the brochure. Of those which were close only two had been submitted informally. The rest were preliminary, and so were returned to the originator with the suggestion that they seemed to be in good shape for formal submission.

Second, it seems to me that what a research-oriented school needs more than anything else is support which above all is of a continuing and reliable nature. I frankly don't see how a school can either educate or perform good research on a financial yo-yo. This means to me that once I have approved a Sea Grant Program—once I have entered into a Sea Grant arrangement with an institution, I have a very strong moral commitment to maintain, and if possible, enhance the support of that institution on a priority ONE basis as long as that institution carries out its end of the arrangement, i.e. educating and performing good science of the type advertised.

This has a rather peculiar implication for the future. If indeed the competition with Viet Nam and other Federal problems is of the dimension we believe it to be right now, there is no question that 1968 will be a very, very tight budget year. The Sea Grant Program is small now, since the \$5 million with which we are currently working was intended to get us off the ground rather than to raise us to cruising speed. If this be level-funded, it is quite conceivable that there could be no Sea Grant activity at all in the coming year. All of our resources would most necessarily be used to maintain those with whom we entered into the original agreements.

Third, there is no question in my mind but that industry is the ultimate consumer of the Sea Grant goods. The services, which are the production of engineers and technicians, will be used by industry. Accordingly, I want to be most sensitive to such guidance as can be obtained from industry. While at the moment I don't choose to fund industry directly (owing mostly to my own inability to understand the complexities of competitive funding), I would nonetheless be encouraging consortia between industry and academic institu-

tions under the current system. For instance, we foresee the development of coordinate educational programs by which the student may alternate between industrial jobs and his academic training, obtaining his degree perhaps in 5 years but having encompassed some 8 semesters on the job. He is getting some subsistence, providing him with educational support; the industry gets a better trained man; and the school is enabled to form a clearer plan for its academic program.

The last point I want to make is to me the most important. Sea Grant is a long-range program, as all ocean programs must be. The establishment of this program was not meant as a triggering action to activate mens' minds and to produce instant genius. The Sea Grant concept is no more a cure-all to resolve all problems of exploitation of the ocean than exploitation itself would be considered a panacea to cure all men's ills. It is not to be. You will not find it tomorrow, you will not find it this next year. About the best I can do for you gentlemen is to say listen in the next decade.