

Sea-Grants: Demand Is High, but Budget Is Low

In October 1966 the "sea-grant" college program was authorized by Congress, the program being so named by analogy to the land-grant college legislation of 1862. The program is now completing its first year since the appropriation of its initial funds, and its opening performance is getting mixed but generally favorable reviews.

By 1 July the Office of Sea Grant Programs of the National Science Foundation will have made grants totaling \$5 million to some 30 colleges and universities. That academicians have welcomed the program enthusiastically is evident from the fact that 170 grant applications and innumerable inquiries have been received. While the program is small, it clearly represents an important new attempt by the federal government to stimulate and support university education and research programs of a practical nature in the field of marine resources.

Some members of Congress have been impatient at the slow pace with which the sea-grant program began and the meagerness of the appropriations requested for it. The Special Senate Subcommittee on Science—whose two majority members are chairman Edward M. Kennedy of Massachusetts and Claiborne Pell of Rhode Island (who initiated the sea-grant legislation)—last month deplored the fact that the first grant was not made until February of this year, 17 months after the sea-grant legislation was enacted. The subcommittee charged, too, that the sea-grant budget for the next fiscal year is inadequate; the budget will, at most, be up only \$1 million over the present year and may be kept to its present level.

"If the administration and [NSF] do not ask for enough funds to support the applications from educational and training institutions throughout the country, then the sea-grant college program may be doomed to dilution and ineffectiveness," the subcommittee said.

No money was appropriated for the program until June a year ago, and this partly explains the delay in starting it. NSF scarcely can be blamed, moreover, for budgetary stringencies which make a major increase in next year's sea-grant budget impossible. The Foundation requested a sea-grant budget of \$15 million, but the Bureau of the Budget imposed a \$6-million ceiling. Leland J. Haworth, director of NSF, told a Senate appropriations subcommittee on 12 June that, unless \$30 million of a \$100-million House cut in NSF's appropriation is restored, the sea-grant budget will be reduced to \$5 million.

Despite his complaint that the sea-grant program was slow in starting, Senator Pell has said the program is now being well run. Representative Paul Rogers of Florida, who was the sea-grant bill's chief sponsor in the House, also has expressed approval of the small team which is administering the program with the help of project consultants and an advisory panel headed by Sanford S. Atwood, president of Emory University in Atlanta.

The University of Rhode Island, in Pell's home state, is among the first six universities to receive "institutional" grants, the other five being Oregon State, the

University of Washington, the University of Hawaii, the University of Wisconsin (Great Lakes studies qualify for support), and Texas A&M University. Florida Atlantic University, a new state institution in Congressman Rogers' south Florida district, is one of more than a score of institutions to receive a "project" grant.

Applications for institutional grants are evaluated by Atwood and his panel as well as by the sea-grant office staff. Institutional programs must be broad in scope. The program at the University of Rhode Island, for which \$477,000 has been awarded, indicates the great variety of activities which may be included. Among other things, it provides for graduate education in ocean engineering, oceanography, and fisheries; research concerned with organic extractables (food, drugs, and the like), ocean engineering and systems analysis, marine economics, pollution, and development and conservation problems; and a regional information program for the benefit of industry and the public.

Budgetary conditions permitting, the universities awarded institutional support this year will receive renewed support in succeeding years, with the grants becoming larger as the sea-grant programs expand. Moreover, such institutions will, within a few years, be formally proclaimed "sea-grant" colleges or universities if their programs develop satisfactorily.

Colleges and universities which do not yet qualify for institutional support, or which wish to mount marine-resources programs of lesser scope, may apply for project support. For example, Florida Atlantic University's \$193,000 project grant supports a cooperative education program in ocean engineering in which FAU students alternate between academic work and on-the-job training, with 6 months of study on campus, followed by 6 months with industry. Caltech has received a \$99,000 grant for a project in which commercially valuable kelp will be grown in the heated water discharged by industrial installations such as steam electric generating plants.

Robert Abel, director of the sea-grant program and formerly chairman of the Interagency Committee on Oceanography, says the program is beginning to encourage large-scale, complex projects of major economic value. Louisiana State University, for example, has been awarded a \$198,000 grant for a project to investigate the potential of Louisiana's vast marsh areas for aquaculture. The sea-grant office helped in the formulation of this project, and, as a mission-oriented agency, it will even be soliciting proposals for attacks on significant problems of resource development and conservation.

If the sea-grant program is allowed a \$6-million budget for the fiscal year starting 1 July, a few new project grants may be possible, Abel says. But, with less money than that, institutional programs and renewable projects may be supported at levels lower than the grantees had been led to expect. Thus, although the sea-grant program shows promise of eventually having a major impact, its immediate prospect is for little or no growth, and possibly for retrenchment.—LUTHER J. CARTER