

ments for marine science are well established. . . . In contrast, there is no strong civil marine technology program." The commission says that marine science has become "Big Science" and that U.S. efforts "are limited by inadequate technology."

Of the total \$8-billion increase which the commission urges for federal expenditure in the marine sciences

during the decade of the 1970's, it advocates that \$1.7 billion be spent for "fundamental technology," \$1.53 billion for applied "specific technology," \$1.875 billion for "national projects" which include some technological components, and \$1.84 billion for "research and education."

In its recommendations on research, the commission proposed "that a small

group of institutions, including the present leaders in ocean research, be designated by the Federal Government as University National laboratories . . . and equipped to undertake major marine science tasks of a global or regional nature." At another point in the report the commission listed institutions such as the Scripps Institution of Oceanography, the Woods Hole Oceanographic Institution, and the Lamont Geological Observatory as "a major national investment around which the Nation's marine science program must be built."

The commission also recommended that "coastal zone laboratories" be established in connection with academic institutions, to engage in scientific investigation of estuarine and coastal-zone processes, and that the Sea Grant College and Program Act of 1966 be amended to permit grants for the construction and maintenance of vessels and other facilities. The commission also thinks that the state of aquaculture is at a low level as compared to that of other countries and urges more research in this area.

Continental Shelf Laboratories

Among the highly intriguing projects backed by the commission are an experimental, submerged, nuclear power plant to be placed on the continental shelf, and a proposal to build laboratories on the continental shelf. Such laboratories, the commission said, could be placed on the shelf bottom in areas of high concentration of mineral and biological resources. These centers would include living and working quarters for 15 to 150 men and would be given logistics support through various methods, including the use of "submersibles capable of mating with the undersea laboratory."

One of the most controversial sections of the commission's report is its recommendation on the extent of each nation's legal access to its continental shelf. The commission argues that the United States should take initiative on securing international agreement to redefine the continental shelf for the purpose of the Convention on the Continental Shelf. "The seaward limit of each coastal nation's 'continental shelf' should be fixed at the 200 meter isobath, or 50 nautical miles from the baseline for measuring the breadth of its territorial sea, whichever alternative gives it the greater area for purposes of the Convention." Those interested in mineral extraction from the continen-

More Grad Students Liable to Draft

A survey by the Scientific Manpower Commission indicates that nearly half of all male graduate students in the sciences will be eligible for the draft in the coming months. This year's June baccalaureates in the sciences and first- and second-year science graduate students are expected to be prime targets, since deferments for graduates, except in the medical sciences, were discontinued in February 1968 and because draft officials have decreed that older men in the 18 to 26 age bracket should be inducted first. Third-year students are generally less vulnerable, since draft rules have held that any student in his second or subsequent year after 1 October 1967 may retain his 2-S exempt status.

The Scientific Manpower Commission, a private nonprofit corporation, polled 2290 departments of Ph.D.-granting institutions on the draft status of male graduate students in science; it received responses from 1237 science departments, which represent about half of the Ph.D.-granting science departments in the United States. Results show that about 45.6 percent of all first- and second-year full-time male science graduate students in the United States, excluding foreign nationals, are potentially liable to induction in the coming months of this year. (A full-time graduate student is defined as any person engaged entirely in study, teaching, or research in a graduate department.)

Among full- and part-time U.S. male graduate students in science, the survey indicates that as many as 47 percent of all students who are paid to do university-sponsored research are potentially liable to induction. Among students who are paid to teach, as many as 50 percent are draft liable. It appears that although many full- and part-time science graduate students are assigned teaching responsibilities, fewer than 9 percent have obtained occupational deferments. According to present regulations, draft boards may not consider for occupational deferment any full-time graduate student who may also be engaged in part-time teaching. However, there are no restrictions against granting occupational deferments to graduate students who do not carry full academic loads, but who are engaged in either research or teaching. A local board can provide an occupational deferment to any part-time student whose teaching or research is considered essential to the national health, safety, or interest, or to the community. The report shows that part-time teaching assistants apparently have a better chance of obtaining occupational deferments than part-time research assistants. It also shows that the fields of physics and chemistry have the highest percentage of students given occupational deferments.

The Commission estimates that the draft calls for the first 6 months of this year will be at least 168,000 men, with high calls continuing into the summer and early fall. The Department of Defense has announced the February draft call at 33,000 and the March draft call at 33,700. The January call was 28,000.

The Commission's report, *A Survey of the Draft Status of First and Second Year Science Graduate Students (Fall, 1968)* may be obtained for \$2 from the Scientific Manpower Commission, 2101 Constitution Avenue, NW, Washington, D.C.—MARTI MUELLER