Statement on the Environmental Center for the
House Higher Education Committee

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by

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ENVIRONMENTAL CENTER

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I am Doak C. Cox, Director of the University of Hawaii Environmental Center.

I should like you to note that, although this discussion has been scheduled among the presentations of research units of the University, the Environmental Center is not a research unit. The Center is very much concerned with research but, like the Marine Programs, its concerns are not limited to that phase of academic functioning.

Establishment and functions

The Environmental Center was established by the Board of Regents effective 1 October 1970 in accordance with the following provisions in Act 132 of the 1970 legislature:

The center shall be so constituted as to make most effective the contribution of the university to the problems of determining and maintaining optimum environmental quality. Its membership shall be comprised of those members of the university community actively concerned with ecological and environmental problems.

(b) The functions of the center shall be to stimulate, expand, and coordinate education, research, and service efforts of the university related to ecological relationships, natural resources, and environmental quality, with special relation to human needs and social institutions, particularly with regard to the State.

Organization

Both prior to and subsequent to the formal date of establishment of the Center, we have given a good deal of thought to forms of organizations that would be most effective in performing the functions described. Inasmuch as the organization selected for the Center is somewhat novel, at least in our University, I should like to take a few minutes to describe some of the background to its development.

We had, available to us of course, examples of environmental departments, institutes, schools, and even colleges that have been established at other universities, which we could have followed as models for organization here. With such forms of organization, the question of who is included and who is excluded is an important one. Those who are included in the environmental unit generally have some fraction of their salary budgeted to the environmental unit, with consequent non-productive increases in bookkeeping costs. The larger the unit is, the broader may
be the array of disciplinary competence it incorporates, but an environmental unit of this sort can never include all of the pertinent capabilities of the university. There will always be many who are concerned, who are competent, and even who are active in environmental matters but who are outside the special department, institute, school, or college. Following the legislative mandate and our own tendencies, our Center is established as an umbrella to cover all departments, all institutes, all schools, and all colleges of the University of Hawaii system, including all faculty and all students with environmental concerns, competence, and activity. We have minimized the administrative superstructure and avoided increases in bookkeeping costs by not attempting at all to split appointments but to recognize that all those involved are working simultaneously toward the goals of the Environmental Center and toward those of the departments and other units in which they are budgeted. I do not want to give the impression that it may at some time seem desirable to create a special environmental school or college, but such activity should be deferred until we can better determine what the scope of such an institution should be. In the meantime the shift in emphasis toward broader environmental concerns that seems to be occurring in some of the University's professional colleges should be encouraged. I do not think we will ever wish to abandon altogether the umbrella approach.

I, as Director of the Center, am responsible to the Vice President for Academic Affairs. The Center policies are developed by a Policy Committee, whose dozen members are appointed by the President. To secure additional competence in policy matters and planning, the Center has established a panel of special advisors, who now number 35. The initial faculty membership of the Center was about 250, on the basis of the Ecology and Man effort in the spring of 1970, but that number has now been expanded due to the initiation of a number of specific efforts, undertaken by special task forces.

It is in terms of these task force efforts that most of the Center's present program is easiest to describe.

Air Pollution

Among the first of the task forces to be established was one whose mission was to make available to the State all possible information pertinent to the actions associated with its federal designation as an air quality control region. This Air Pollution Task Force was engaged initially in an attempt to add to the observations of ambient air quality that, at present, provide a hopelessly inadequate base for the establishment of sound standards. Most recently, however, because of the stringencies of the administrative time-table established by the Clean Air Act of 1967, it has turned to a review of the observations available, their applicability to the establishment of standards, the federal requirements as to the standards, and the standards established elsewhere, and has reported to the Department of Health its recommendations, based on such information as is pertinent, however inadequate, as to standards appropriate in Hawaii.
A very recent amendment to the Clean Air Act has changed the ground rules, the State may choose, a somewhat less frantic course of action. If so, I am sure the Air Pollution task force will be prepared to assist in making the best use of the time available.

**Interim Session**

Another of the first task forces established was one to develop and manage an environmental program during the 1971 interim session of the University, intended if possible not only to continue to engage student, faculty, and community interest in environmental problems but to try to bring into the consideration of these problems the recognition that because these problems are so essentially interwoven with human existence and modern technology, their necessary solution involves both tangible costs and degrees of reorientation of societal goals for larger than is generally realized. Although it is still too early to assess the success of the interim session activities in terms of the latter goal, it is obvious that its success in the engagement of students, faculty, and the community was very great indeed.

**Subsoil cuts**

Both to provide an example of both the degree to which technology can remedy the environmental detriments of heedless action and to illustrate the costs of such abatement undertaken after the detriments have appeared, a task force was established to demonstrate the effects of applying agro­nomic and soils technology to a portion of a conspicuous subsoil cut in upper Manoa Valley in which there had already been a very large expenditure of citizen energies without adequate technological guidance. The efforts of the task force are still underway, so their results cannot yet be assessed, but we expect them to show not only how effective a redirected technology may be in reducing technologically caused environmental problems, but how much better it would be if the technology were subject to better controls originally.

**Environmental effects of second Oahu campus**

One task force that has made no progress is that which was established to review the environmental effects that might be associated with the creation of a second baccalaureate college campus on Oahu. The lack of progress is due to the inaccessibility to the task force of pertinent background information.

**Heavy-metal pollution**

The task force most recently recognized includes a group investigating the distribution of toxic heavy metals in the Hawaiian environment. One report demonstrating the non-detectability of mercury generally in the waters but the presence of significant mercury concentrations in the sediments of Kapalama and Keehi was made prepared for use in the recent report of
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the Governor's task force on Koehi Lagoon, and a second report has since been submitted to the Office of Environmental Quality Control for review by concerned agencies.

Socio-ecological model

Although the efforts of the several task forces so far described are all multi-disciplinary they all have specific focuses except for the interim session effort, which was limited in time. One task force is starting with the broadest possible mission, that of describing and learning how to model the behavior of, the socio-ecological system in which we live in Hawaii. This task force on which there is representation from the Oceanic Institute, after considerable wrestling with the overall problem, has proposed with the anticipation of early external foundation support, the creation of an Environmental Simulation Laboratory involving the participation not only of the University and the Institute but the governmental, business, and citizens communities in an initial test effort centering on water quality control in Kaneohe Bay and associated land-use in the surrounding area.

Other efforts and problems

In addition to the efforts engaging the attention of special task forces, the Center has been heavily involved in providing services to the Office of Environmental Quality Control, and other state departments including the University itself. Examples are, representation on the Koehi Lagoon task force, consultation with the Department of Health on its water quality control program, review of federal department environmental impact statements for the Department of Planning and Economic Development, consultation in the development of the University's sea grant program, with particular regard to coastal water quality and coastal zone management portions. Although the Center's efforts have so far been concentrated on the Manoa campus, we have met with administrators, faculty, and/or students at campuses on Hawaii, Maui, and have plans for a visit to Kauai to establish the most efficacious mode of system-wide functioning.

We have done very little so far with the knotty problems of coordinating environmental courses and curricula, but have taken the first step toward grappling with them.

Although your committee is not, I realize, concerned especially with the fiscal problems of such University units as the Environmental Center, there are two such problems that I must mention because of their direct bearing on the present and future scope and nature of the Center's program.

The present scope of the Center's program is an indication of what can be done with the formal recognition of and promise of financial support for a unit of this kind. It is not an indication of what can be done with actual financial support. You may recall that the legislature last year made an appropriation to the Office of Environmental Quality Control from
which the University would get the funds by contract. The establishment of the Center, the establishment of the OEQC, and the preparation of the contract were all disappointingly slow in accomplishment, but the award of the contract has yet to be formalized. In the meantime the Center has undertaken obligations far exceeding a small loan made available to get it started by the University President.

The future effectiveness of the Center as a unit of the University and hence a unit coming within the cognizance of your committee depends upon the transfer of its basic operating budget from the budget of the Office of Environmental Quality Control to that of the University. The role of the OEQC must include essentially both planning and policy making. Plans and policies of human origin inevitably turn out to have defects, but frequently those who are slowest to recognize the defects are, understandably those most closely associated with the development of the plans and policies. The Environmental Center must be available to assist in the development of environmental plans and policies through organization of the services of members of the University community having pertinent capabilities, but the Center must also have sufficient autonomy to provide for the critical but responsible review of the consequences of these plans and policies. Otherwise it would not qualify as an academic unit, and it would lose its effectiveness as a coordinating institution to the academic community. Fiscal independence of the Center's basic operations is an essential to such autonomy, although it is quite appropriate that the Center should look to the OEQC as well as other State and Federal agencies, and private foundations for the support of special efforts.