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ENVIRONMENTAL EDUCATION

Activities of the 91st Congress

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ENVIRONMENTAL EDUCATION

Along with Congressional awareness of the need for more comprehensive legislation in environmental management, there has been growing concern over the average citizen's lack of knowledge, appreciation and understanding of environmental problems. This deficiency was traced largely to inadequacies in school curricula. The lack of comprehensive environmental education programs was found to be compounded by an equally serious shortage of instructors skilled in teaching environmental concepts, and of adequate, up-to-date teaching aids, especially in the kindergarten-through-12th grades. Adult education programs dealing with community environmental problems were found to be few in number and meager in scope.

The intent of Congress having to do with environmental education was expressed in proceedings published following a joint House-Senate Colloquium on a National Policy for the Environment held in July, 1968. It stated, as an element of policy, that:

Education shall develop a basis of individual citizen understanding and appreciation of environmental relationships and participation in decisionmaking on these issues.

At the same time, the Executive Branch of the government voiced similar dissatisfaction with existing environmental education programs. A report of the Citizens Advisory Council on Environmental Quality stated, in part:

...our formal education system has done little to produce an informed citizenry, sensitive to environmental problems and prepared and motivated to work toward their solution...

...Extension Service programs are generally out of touch with the environmental problems of modern communities and should be reviewed and redesigned...

...Title III of the Elementary and Secondary Education Act enabled the establishment of over 100 environmental education centers; but no program was initiated to disseminate to the rest of the Nation's teachers the teaching methods and curriculum materials developed at these innovative centers...

...for adults, environmental study programs sponsored through Title I of the Higher Education Act have failed to reach a large sector of the general public because of excessive reliance on traditional classroom methods.

Meanwhile, at institutions of higher education, student and teacher involvement in environmental problems became increasingly more pronounced. While conventionally-organized departments at colleges and universities across the Nation began to introduce environment-oriented studies into their curricula, inter-departmental and inter-institutional environmental programs started to group together schools with similar aims in curriculum development.

Legislation

The Environmental Education Act of 1970 proposed to remedy the shortcomings of present environmental study programs by launching "a major educational effort directed at developing a better understanding of and attitude toward our environment so that future generations will not be faced with the problems we are only now beginning to confront." The Act proposes to accomplish its purposes by:

- encouraging and supporting the development, demonstration and evaluation of innovative and improved curricula in environmental studies;
- providing for the dissemination of significant materials for use in programs at preschool, elementary, secondary, college and adult education levels;

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- initiating and maintaining programs in environmental education at the elementary and secondary school level;
- conducting preservice and inservice teacher training and training of other educational and public service personnel, community, business and professional leaders, and government employees at local, State and Federal levels;
- operating adult and community education programs which would attract individual citizens and citizen groups in their communities;
- developing programs and materials for use by the mass media in dealing with the environment and ecology; and
- planning outdoor ecological study centers.

In support of the bill's purposes, witnesses at the House and Senate Hearings stressed that environmental education in elementary and secondary schools should be complemented by many types of community activities and by programs disseminated by the mass media. Testimony also pointed up the faults of excessive compartmentalization in universities and the need for consideration of the total environment on a multi-disciplinary basis.

To insure the continuation of a program after Federal funding has terminated, the Act stipulates that the Federal share for such programs cannot exceed 80 percent for the first year, 60 percent for the second year and 40 percent for the third year; curriculum development, testing and dissemination is exempted from this cost-sharing provision. The Act also established a program of small grants (\$10,000 or less) for civic and other organizations to conduct courses or conferences for adult groups. An Advisory Committee on Environmental Education to assist in carrying out its provisions is included in the Act; this provision also requires that

no less than three ecologists and three students be represented on the twenty-one member Committee. Finally, the Act establishes a separate Office of Environmental Education within the Office of Education to assure that environmental education programs would not have to compete with other programs carried out by the Office of Education.

Environmental Education Act.

House: H. R. 18260. Reported (No. 91-1362) July 31, 1970 from Education and Labor. Passed August 3, 1970, concurred in Senate amendments, October 13, 1970.

Senate: H. R. 18260. Reported (No. 91-1164) September 9, 1970 from Labor and Public Welfare. Passed September 21, 1970, amended; Senate concurred in House amendments, October 13, 1970.

Approved: November 1, 1970. Public Law 91-516.

Legislative Proposals

A number of other environmental education bills introduced in the 91st Congress added to or enlarged upon ideas incorporated in the Environmental Education Act:

Environmental Reclamation Education.--This proposal emphasized the use of funds for the organization within universities of integrated courses of study in environmental fields which would be part of new ecological degree-granting programs. Federal funds would be used to establish a system of regional ecological-environmental education centers. It would also create a National Advisory Commission on Technology and the Environment to investigate methods of identifying deficiencies in existing governmental decision making relative to technological advances and their effect upon environmental quality.

National Laboratory for Environmental Science.--Two bills were introduced to establish a National Laboratory for Environmental Science which would act as a contractor for Federal agencies with responsibility for environmental affairs. Its primary function would be to carry out research in environmental sciences and develop a watchdog function to call early attention to potential threats to the environment. At present there is no laboratory within the Federal government which carries out systematic research on the environment as a whole.

National College of Ecological and Environmental Studies.--This proposal would establish, within the National Science Foundation, a National College of Ecological and Environmental Studies to foster ecological and environmental studies and vocations by recognizing outstanding undergraduate scholars in the sciences and engineering. Grantees selected by its Board would attend appropriate short term seminars or institutes at institutions of higher education.

Environmental Career Fellowships.--A proposed bill would have authorized the Commissioner of Education to award fellowships for graduate or professional study in environment-related careers to increase the number of qualified professionals in environmental management fields.

Population Education.--This proposal would authorize Federal grants to elementary and secondary schools and other educational institutions to conduct special educational programs and activities to enhance understanding of population dynamics. It would also create pilot projects in population dynamics curricula, their evaluation, and the dissemination of significant materials resulting from such projects.

Pollution Abatement Awards.--Legislation was introduced to amend the National Environmental Policy Act to provide for a program to honor persons, industries and organizations for significant activities in pollution control. Honorariums would be extended to private nonprofit educational service, or public affairs organizations which carry out continuing programs in pollution abatement.

Recent Reports and Their Recommendations

In addition to reports dealing specifically with environmental education, many others contained sections or recommendations on environmental education. The following reports contain ideas worthy of consideration when additional legislation is formulated:

1. U. S., Congress, House, Subcommittee on Science, Research and Development. Environmental Science Centers at Institutions of Higher Education, Survey. 91st Cong., 1st Sess., December 15, 1969.

A survey was made of current interdisciplinary programs in colleges and universities established to deal with varied fields of environmental science. The object of the survey was to gain a perspective on the future production of manpower and knowledge to guide Congress in fostering these programs. No recommendations were made in the report, but the following findings indicate features which, when applied, lead to effective structuring and functioning of the centers:

- A wide range of interdisciplinary and interinstitutional involvement with increasing emphasis on the social sciences is deemed essential and valuable.
- For maximum effectiveness, centers' activities are often linked to other universities, public agencies, private

organizations and industrial enterprises, and various interinstitutional combinations.

- There is considerable involvement by faculty and students in regional and community projects.
- Recommendations for improved funding practices include, coordinating mechanisms at the regional and Federal levels; basic planning, programing and administrative grants; and the establishment of funding criteria for environmental science centers by Federal agencies or other sources.

* * *

2. John S. Steinhart and Stacie Cherniak. The Universities and Environmental Quality -- Commitment to Problem Focused Education. Report to the President's Environmental Quality Council. Office of Science and Technology, Executive Office of the President, September, 1969.

This report was a brief study of the contributions that can be made by the colleges and universities toward improving the quality of our physical and biological environment. The report stresses the need for multi-disciplinary activity to respond to problems that do not fit into established disciplinary frameworks. Their major recommendation was that the Federal Government should assist in the formation of Schools of Human Environment at colleges and universities. These Schools would provide the criteria needed to face problem-focused multidisciplinary programs which are relevant to society's problems. Initial funding would be by an ad hoc group drawn from the interested mission agencies and the National Science Foundation, and operating under the policy guidance of the President's Cabinet Committee on the Environment.

* * *

3. NAS-NRC, Environmental Study Group to the Environmental Studies Board, Institutions for Effective Management of the Environment, Washington, D. C., 1970

This report proposed "a national program for the effective management of the environment." It was intended to provide a basis on which recommendations for effective approaches and institutional mechanisms could be made and carried out. The recommendations applicable to environmental education included:

- a. Establishment of a National Laboratory for the Environmental Sciences, which might be contractor-operated and funded by the several Federal agencies with environmental responsibilities. Its prime missions would be to carry out research in the environmental sciences and to develop a quick-reaction field function that would call attention to potential threats to the environment.
- b. Establishment of an Institute for Environmental Studies to carry out the following functions: (1) long-range planning for the enhancement of the environment; (2) early warning on potential threats to the environment; (3) rapid analytical studies in response to emergencies; (4) rapid field analysis; and, (5) study and analysis of social, political, economic, administrative, legislative, and other factors that influence environmental decisions and management.
- c. Development and sponsorship by the National Science Foundation of a Junior Environmental Education Program at secondary school level.
- d. Creation of multidisciplinary programs in environmental affairs within existing universities, to be funded in part by Federal grants; and, establishment of an experimental problem-oriented graduate school to be supported in part by a proposed Environmental Coalition.
- e. Establishment of a National Environmental Coalition, which would be supported by foundations, conservation groups, population organizations and others. The Coalition would encourage and support the formation of local environmental coalitions all over the country. Such coalitions could serve as viable mechanisms through which public action programs might be organized, channeled, and implemented.

4. U. S., Department of Health, Education and Welfare, Office of Education. A New Role for American Education, May, 1970.

This report details a plan by the Office of Education for "Environmental/Ecological Education." The Federal role would be to support activities on a regional basis through the Regional Assistant Commissioner for Education, and to coordinate the activities of the various Federal agencies in an overall environmental education program.

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5. U. S., Department of the Interior, Bureau of Outdoor Recreation, Education and Outdoor Recreation. Washington, D. C., August, 1968.

This report discusses the opportunities for schools and other agencies to develop the mutual relationship between education and outdoor recreation. It recommended the following:

- a. Elementary and Secondary Education:

- That environmental education, with appropriate emphasis on outdoor recreation, be included in the instructional programs of the elementary and secondary schools;
- That environmental education be made an integral part of the course content;
- That consideration be given to an elective course in junior and senior high schools covering the broad field of man's relation to his environment;
- That elementary and secondary schools provide in-service training in the field of environmental relations in the form of seminars, workshops, and special lectures for all teachers;

- b. Higher Education - General

- That schools of education offer a one-semester course on man's relation to his environment, open for election by all prospective teachers;

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- That colleges and universities offer environmental education for the public in general and for school teachers in particular;

c. Higher Education - Professional

- That professional programs in schools of education stress those aspects of outdoor recreation that involve the use of playgrounds and parks;
- That schools of natural resources and forestry develop more effectively their current efforts to give all students an understanding of the relation of outdoor recreation to other uses of natural resources;
- That schools of natural resources and forestry with adequate staff and facilities develop separate curricula and departments of outdoor recreation as a field of comparable importance with other aspects of natural resource management;
- That in institutions in which outdoor recreation is handled in more than one unit, every effort be made to correlate their activities;
- That, in all programs dealing with outdoor recreation, strong emphasis be placed on breadth of coverage;
- Accreditation of professional programs in environmental education is desirable;

d. Higher Education - Technical

- That more adequate provision be made for the education of technicians through two-year programs of instruction;

e. Related Fields

- That university units in such fields as landscape architecture, environmental design, and regional and urban planning include outdoor recreation as an integral part of their activities;

f. General

- Congress should establish an Environmental Education Review Commission to undertake a comprehensive study of the relation of education to wise use of the natural environment;

- That the many educational, resource, youth, and civic organizations concerned with outdoor recreation strengthen and correlate their activities in the educational field;
- That both public agencies and private organizations increase their current efforts to use the mass media as a tool for disseminating information concerning the various aspects of man's relation to his environment; and
- Concerted action (by educators, managers, and administrators) is essential to education as a major means of helping to make outdoor recreation a vital force in promoting the well-being of the Nation.

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6. U. S., The President's Council on Recreation and Natural Beauty, From Sea to Shining Sea, Washington, D. C., 1968.

This popular report included several recommendations for environmental education:

- that Federal land-managing agencies accelerate the rounding out of a coordinated nationwide system of natural areas on lands they manage...to meet national research and education needs for such areas;
- that State and local school systems establish environmental education programs;
- that Federal agencies concerned with research and education and with urban and rural environments exercise national leadership to improve communication and coordination in the field of environmental education, help advance curriculum development and research in this field, and assist colleges and universities in training specialists to work with State and local school systems in developing environmental education programs; and
- that Federal agencies which manage lands or provide assistance in the management of other natural resources work with school systems to provide improved opportunities for first-hand environmental conservation education.

Events Pertinent to Environmental Education

- Earth Day. To focus students' concern on the environment, environmental teach-ins were held on thousands of campuses and high schools throughout the country on and about April 22, 1970. In several instances, the teach-ins sparked permanent environmental organizations which continue to be active at the community and State levels.
- High school debate. The topic for high school debating teams for 1970-1971 is "How can our physical environment best be controlled and developed?"
- Seminars. Government agencies and private organizations held conferences and seminars involving hundreds of graduate students. One such conference was sponsored by the Institute for the Study of Health and Society of Decatur, Georgia and funded by the Consumer Protection and Environmental Health Service in HEW. The Federal Water Pollution Control Administration held a series of regional water pollution control seminars which resulted in the formation of SCOPE (for Student Council on Pollution and Environment). Under an HEW grant, the League of Women Voters sponsored a number of air quality workshops in four cities. Their purpose was to inform community leaders of the facts of air pollution and of the complex control and abatement programs that must be undertaken.
- Communications media programs. In addition to environmental "specials" on the commercial networks, the U. S. Office of Education launched the Public Broadcasting Environment Center with a grant to the Corporation for Public Broadcasting. The Center "plans to produce weekly radio and television programs, augmented by other media and materials, designed to increase national environmental awareness, to encourage effective environmental action programs, and to enrich environmental education for elementary and secondary school children."
- New publications. The Scientists' Institute for Public Information and its affiliated local committees prepared a series of workbooks on environment. Its "Environmental Education 1970" describes "a variety of needs, approaches and experiences in undergraduate environmental education" and lists courses from a number of colleges and universities. New series on the environment have begun to appear in the daily press and in weekly and monthly magazines such as Time and Saturday Review. Professional journals in the educational field have followed suit. And publishing companies such as J. G. Ferguson, a subsidiary of Doubleday & Company, have formed an Environmental Education Advisory Board.

- Curriculum development. An increase in environment-oriented courses was noted in both private and State-supported institutions of higher education, within established departments and within inter-disciplinary frameworks. Experimental environmental education courses are also being taught in public schools in several sections of the U. S. Implementation of a nationwide program of environmental education is being undertaken by the Office of Education which calls its program Environmental/Ecological Education (EEE), and by interested private groups such as the Consortium on Public Education in Environment Awareness consisting of engineers, planners, educators, conservationists and professional and landscape architects.

- New programs. In addition to individual community projects, and those sponsored by private and public educational institutions, the National Environmental Study Area (NESA) program of the Department of Interior is a nationwide endeavor which combines government materials with the resources of local educational communities. ESAs are established in National Parks to supplement school studies. Park personnel establish the sites, initiate programs and provide guidance and orientation. Local teachers conduct the program.