

## **A PROPOSAL TO ESTABLISH THE FLORIDA ENVIRONMENTAL INSTITUTE**

**Arthur R. Marshall**  
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The pressures of expanding population and technology on Florida continue to degrade its human and natural resources despite the combined counter-efforts of all existing institutions. Government, more often than not, either fosters or adds to the degradation. Educational institutions seem unable or unwilling to apply their store of knowledge effectively to the problems. Efforts of the business community are often exploitive, non-existent, or are superficial or adds to the degradation palliatives.

It is evident that Florida is on a course which ultimately will insure its joining the parade of states already sunk in environmental quagmires. Some already see Florida as the "New Jersey of the South" where dense population and pollution produce deplorable living conditions. Strenuous efforts of recent years are slowing the progression toward imbalance, but not diverting it. Philosophically we suffer a paradoxical ailment which allows us to look back two hundred historic years in pride, but not five years ahead in preparation or anticipation.

Florida is faced with major social decisions, the outcomes of which will determine the future of its unique environment and the quality of life of its people. Some of those are:

1. Should the growth ethic continue to be the dominant determinant of our personal futures, as well as those of our urban and rural environments?
2. What are the total benefits and costs, economic and environmental, of growth and expanding technology, and to whom?
3. What are the causes of city decay and bankruptcy, of the degradation of lakes, rivers, bays, scenic beauty and wildlife?
4. Are there ways to keep cities economically and environmentally viable?
5. How can we protect the essential values of our fresh and salt waters, soils, wilderness and wildlife?
6. Should we recycle treated sewage effluents? How can it be done?
7. How should we view the doubling of power generation every 7-8 years?
8. If populations must ultimately stabilize at some level, what factors determine this? If they do not stabilize, where are Florida and Floridians headed?
9. Can we de-emphasize the growth ethic and supplant it with other economically viable pursuits which will provide profits and jobs and prevent environmental degradation?
10. Can we maintain our present life-styles? Should we?

The kinds of decisions we face cannot be made by agencies of government alone, nor by educational institutions alone, nor by the business community alone. They must be made by those who are affected by the results of those decisions - the people of Florida. Though the public decision-making process is imperfect, it is democratic, it solicits participation by those affected by the decisions and it is a means we can and do use to add apples, oranges and grapes and to decide whether the resultant fruit cocktail is palatable.

It is clear that one troublesome tendency which we must overcome is our addiction to specialization. Americans are habitual specialists. Our industries are primarily institutions which specialize in one or a few products, in the exploitation of one or a few resources.

American medicine is practiced through specialties. Its assorted practitioners have come to look at a kidney, a lung; or a genito-urinary tract and only recently are coming again to recognize that these comprise a man or a woman.

Our universities produce many persons specialized to such a high degree that there is no valid reason to expect them as individuals to be responsive to our array of systems problems.

Government is made up of specialists. It was the specialists of government who sought to drain, to farm, to build roads, to divide the Everglades pie into a hundred provincial, geographic, political, and mission-oriented parts which nearly tore it apart.

Cities -- and urban-oriented counties -- are specialists. Their specialty is growth. It is a dedication with much historic momentum and great inertia. The inertia carries us on despite widening bankruptcy. The result can be seen readily in the spreading slum core at the center of the metropolitan area, the general inability of city governments to fund needed utilities and services, and the entrance of large federal funding on the local scene.

In this era of rapid population doubling, burdens on virtually all essential resources have been so intensified that assimilative or carrying capacities are equaled or exceeded, or soon will be. It is no longer possible to regard the endless consumption of space, the discharge of wastes into air and water, the consumption of soils and mineral resources, etc., as matters of little or no moment. They are all prodigal. We must now reckon with the intrinsic functional characteristics and limits of entire life-support systems. We can do this only through combined study and analyses of the problems by interdisciplinary teams of specialists interwoven with the budding group of system generalists which we have.

For these reasons I propose the establishment of the Florida Environmental Institute. The Institute would be a non-profit, tax-exempt independent corporation chartered under the laws of Florida. Its primary purpose would be to analyze environmental problems on an integrated basis and to provide that information to the officials of the State and to the people of Florida. Its second purpose would be to provide selected college students with exposure to the highly complex and integrated nature of our environmental problems. The students would participate fully in the workings of the Institute. Students selected for this educational process would be chosen to insure the representation of many professions and geographical areas of Florida.

While a primary purpose of the Institute would be to serve government, it would be independent of government or any other existing institution. This is not a new concept. In January, 1970, an Environmental Study Group of the National Academy of Sciences stated:

VI. Decision-making in environmental matters at all levels of government has been hampered by lack of adequate analyses of what is now taking place and alternative options. We *recommend* the establishment of an Institute for Environmental Studies. The Institute would carry out the following functions: 1) Do long-range planning for the enhancement of the environment; 2) provide early warning on potential threats to the environment; 3) conduct rapid analytical studies in response to emergencies; 4) carry out rapid field analysis; and 5) systematically study and analyze the social, political, economic, administrative, legislative, and other factors that influence environmental decisions and the management of the environment. In order to achieve and maintain objectivity and independence, the Institute should be funded largely by the private sector, though it would, as well, accept grants and contracts from government agencies. The Institute would probably need a staff of approximately 200 professional researchers and analysts, including ecologists, biologists, economists, sociologists, physicians, lawyers, engineers, physicists, chemists, architects, social psychologists, and political scientists, particularly specialists in public administration and international relations, as well as information specialists and others. An institution of this size would require a sizable budget, a substantial portion of which, we believe, should come from the private sector-foundations, industry, and conservation groups-the remainder from contracts with federal, state, and local governments.

An effective Institute would:

1. Need to be financially independent of any department or agency of government and of industry and special-interest groups
2. Need to build confidence in its integrity among clients and supporters as well as among the public
3. Need a talented and highly professional and dedicated staff, broadly representative of a suitable blend of the various relevant disciplines but well disposed toward interdisciplinary efforts
4. Need experienced and insightful public-policy specialists and, at least on an *ad hoc* basis, participation of administrators and other governmental officials
5. Need sufficient financial resources, with reasonable expectations of continuity of support
6. Need to make widely available to the public all studies and research findings
7. Need a conscious and conscientious recruitment policy aimed at attracting young people and placing them in positions of responsibility and influence

(From: *Institutions for Effective Management of the Environment*, Part I, January, 1970 pp. 8-9. Report of the Environmental Study Group to the Environmental Studies Board of the National Academy of Sciences, National Academy of Engineering.)

More recently, Senator Henry Jackson introduced Senate 1216 to establish on a national basis the earlier recommendation of the National Academy of Sciences Committee. Senator Jackson's bill of March 12, 1971, would "amend the National Environmental Policy Act of 1969 (Public Law

91-190), to fund and establish a nonprofit Environmental Policy Institute, and for other purposes." The bill states in part:

That as presently constituted local, State, and Federal governments do not have an adequate capacity to integrate and evaluate the growing body of environmental research now underway, nor to develop a systematic and critical manner the alternatives such research presents for the development of new and the restructuring of existing governmental policies and programs; and that there are no existing nongovernmental institutions capable of adequately performing this function in an objective and comprehensive manner and on a full-time basis.

Another section reads:

(b) The Congress further finds -

(1) that there is a need for objective, impartial policy analysis to be conducted by an appropriate institute which is independent of government and private enterprise, including a broad program of research, and the identification and development of alternative solutions to existing and emerging environmental problems;

(2) that the institute should be a center for systematic environmental problem solving and policy - oriented research conducted on a broad, interdisciplinary basis;

(3) that the institute should be available to local, State, and Federal governmental agencies to assist in the assessment, development, and presentation of policy alternatives, but should have the freedom and independence to extend its studies to matters other than those specified by its government sponsors; and

(4) that it is a responsibility of the Federal Government, in conjunction with appropriate charitable foundations, to establish, to assist, to encourage, and to fund such an Institute.

Senator Jackson's bill was reported out favorably by the Committee on Interior and Insular Affairs and was passed by the Senate. Although Senator Jackson's bill is aimed at a national institute, the principles are equally applicable to the needs of Florida.

Policy direction would be given to the Florida Environmental Institute by a board of five to seven members who are concerned with environmental problems. The Institute would be lead by a Director, who would be supported by a full-time staff which would include the following professions - each to be selected for his experience in and concern with environmental problems:

- ecologist
- economist
- biochemist
- biologist
- attorney
- environmental educator
- systems analyst

- public health specialist
- public information specialist

An administrative officer, librarian, computer programmer, and sufficient supporting personnel would also be employed. From time to time, professionals in other disciplines would be employed on a part-time basis. Some of them would be:

- public health officers
- landscape architects
- architects
- hydrologists
- urban planners
- transportation planners
- agriculturists
- pollution technologists
- engineers
- political scientists
- sociologists

The cost of operation of the Institute will run in the order of \$80,000 per year for support of each professional staff member. With the Director and nine support members listed on page 5, this would total \$800,000. Funds will be sought from private individuals, foundations, possibly from government. Individual contributors might direct their support to a particular staff member. If some business enterprise should seek assistance, such as the power industry, direct funding of costs by them will be required.

In addition to the general problems discussed above, the Institute will seek to:

1. Propose solutions to environmental problems of Florida.
2. To review programs of proposed environmental research for their applicability and timeliness to such problem as they seek to resolve.
3. To inform and assist state government and the public as a first priority.
4. To instruct selected college students in the intricacies and approaches to environmental problems, by bringing them to the Institute for periods of observation and study. Their assignment periods would be established in conformity with the quarters or semester systems of the universities, or as near to that as possible. On this basis, one student would be assigned to each professional staff member for each term of the school year. This would produce thirty to forty "graduates" each year. Some students could be retained for more than one term if they desire and if such extended assignment is in accordance with the goals of the Institute.
5. To establish a computer data-storage and retrieval program for the great masses of environmental and related data which already exist or shall be gathered for Florida.
6. To conduct computer-simulation programs, or advise their conduct, which treat environmental (urban and rural) problems of Florida.
7. To encourage applications of the remote sensing and other capabilities of NASA to the environmental problems of Florida.

8. To operate in conjunction with the two hundred professional volunteers of the Florida Defenders of the Environment.
9. To release all findings, recommendations, reports, etc., to the public on a broad base, including the use of films, slides, and the news media.

The only reason for pursuing such a program as that proposed is that we must. Florida has a host of environmental problems, urban and rural, which disturb its people and the nation. It also has outstanding environmental treasures, yet viable, unique and salvable, unequaled in the nation.

These two disparate circumstances of despair and hope give Florida the opportunity to lead the nation to environmental success or failure - to environmental chaos or maturity - and to protect itself and its people while doing so. It also has many people who care, both experts and laymen.

The approach to Florida's environmental problems envisioned in this plan is basically an enlargement of the present program of the Ford Foundation sponsored Division of Applied Ecology which I direct at the University of Miami. In the first year of this program, we have produced analyses of specific environmental problems. The results have been rewarding and beneficial to both private and public decision making. A 1971 paper entitled "Repairing the Florida Everglades Basin" contributed to Governor Askew's convening of the "Governor's Conference on Water Management in South Florida" in September, 1971. Conference recommendations to the Governor resulted in a Land and Water Use Task Force, of which I was a member. The Task Force prepared significant environmental bills which were presented to the Florida Legislature.

In similar fashion, the Division has published significant studies prepared by our interdisciplinary staff of ecologist, land planner, hydrologist, and biologist:

1. Guidelines to direct development of a large portion of the undeveloped areas of south Dade County. These guidelines focused attention on existing finite resources, particularly water, and proposed development practices and population limits relative to these environmental constraints.
2. The G.A.C. Three-Islands development proposal for Hollywood-Hallandale. At the request of Governor Askew, an environmental impact statement was prepared which defined impacts upon urban resources in terms of noise, traffic, density, open space to name a few.
3. Evaluation of the route of I-75 across the Florida Everglades. Three alternatives and a no-road policy were tested against the ecological constraints of the region and the impact of the road which would encourage development. (in conjunction with others)
4. The proposed Tarpon Spring power plant of the Florida Power corporation (a project accomplished jointly with Conservation 70's and Florida Defenders of the Environment) was studied by a selected group of ecologist, planners, engineers, biologist, to define ecological constraints within the area and make recommendations which FPC could follow before construction was begun.
5. The need to protect the Big Cypress watershed. Through the diligent efforts of conservationist groups and public agencies, the Federal government's attention to the reality of the proposed acquisition was finally achieved.

While no one of these cases is concluded, our work has led to significant shifts in public awareness and actions, and to corresponding shifts in governmental decision making.

In its effort to bring the issues to the people, the Division has sponsored or co-sponsored a number of conferences, its members have made many public appearances and contributions to the press and other news media on environmental issues. A recent conference of agency personnel - state and federal - and interested public, discussed the "Environmental Impact Statement" as a viable tool for inter-agency and interdisciplinary involvement in environmental management. The conference was held in an effort to improve statement preparation and to upgrade its completeness through communication.

The Division employs three graduate students on a part-time basis: a candidate for a degree in law, a graduate engineer, and a meteorologist. This gives the students exposure to environmental issues and greatly broadens their education base. This program further gives the Division contact with at least three respective departments.

We are concerned that our present operations often lack other discipline participation and that we are too few in number to examine more than a fraction of the many opportunities potentially open for study in this time of great concern with the human environment.

Your comments, criticisms, and offers of assistance will be appreciated.