



**MEMORANDUM**

**To:** Donna E. Shalala, President  
**From:** Jane E. Connolly *Jane*  
Chair, Faculty Senate  
**Date:** 2 December 2002

**Subject:** Faculty Senate Legislation #2002-10(B) -- Establishment of the Center for Ecosystem Science and Policy

\*\*\*\*\*

The Faculty Senate, at its 20 November 2002 meeting, voted to approve the establishment of the Center for Ecosystem Science and Policy with the stipulation that the Center be reviewed in five years, as provided in Section C17.1 of the *Faculty Manual*. The purpose of the Center is to create and foster innovative, interdisciplinary initiatives designed to bridge the gap between science and policy in the environment. The proposal is attached for your reference.

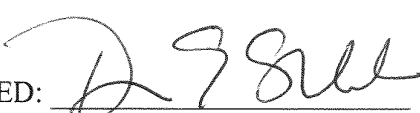
This legislation is now forwarded to you for your action.


JC/kl

**cc:** Luis Glaser, Executive Vice President and Provost  
Mary Doyle, School of Law

CAPSULE: Faculty Senate Legislation #2002-10(B) – Establishment of the Center for Ecosystem Science and Policy

**PRESIDENT'S RESPONSE**

APPROVED:  DATE: Dec 4, 2002  
(President's Signature)

OFFICE OR INDIVIDUAL TO IMPLEMENT: 

EFFECTIVE DATE OF LEGISLATION: 12/1/02  
(if other than June 1 next following)

NOT APPROVED AND REFERRED TO: \_\_\_\_\_

REMARKS (IF NOT APPROVED): \_\_\_\_\_

## MEMORANDUM

**TO:** Faculty Senate

**FROM:** Professor Mary Doyle  
School of Law

Dean Otis Brown  
Rosenstiel School of Marine and Atmospheric Science

**SUBJECT:** Request for Approval of Charter for the U.M. Center For Ecosystem  
Science and Policy

**DATE:** October 18, 2002 [REVISED November 1, 2002]

The purpose of this memorandum is to request approval of creation of the Center for Ecosystem Science and Policy ("CESP") at the University of Miami, and the charter of the CESP, attached hereto. This memorandum also provides the Faculty Senate with background information in connection with this request. Plans for the Center have been developed in consultation with U.M. faculty and deans, and through the work of an advisory committee of faculty from across the University, which has been meeting for the past year. Members of the committee include: Joanna Lombard, Architecture; Guillermo Goldstein and Linda Farmer, Biology; Helena Solo-Gabriele and Thomas Waite, Engineering; Richard Weisskoff, International Studies; Richard Williamson and Cynthia Drew, Law; Jonathan West, Political Science; and Fernando Miralles-Wilhelm, Don Olson, Jose Rodriguez and Peter Swart, RSMAS.

### THE PURPOSE OF CESP

The purpose of the CESP is to create and foster innovative, inter-disciplinary initiatives designed to bridge the gap between science and policy in the environment. Environmental policy and management cannot successfully be advanced or sustained unless demonstrably based upon the best available science. Science has shown us that the complex connections within and among earth's components must be considered in environmental policy-making. Frequently we must act in the face of scientific uncertainty. This means that scientists and decision-makers have to work in close collaboration to solve environmental problems. They need to communicate effectively, to ask for and receive salient advice, and to resolve scientific and related political disputes. While there are a number of established environmental programs in universities across this country, few have chosen to integrate science and policy approaches in a balanced way. We believe that the intersection of science and policy provides an effective focus for an inter-disciplinary center for environmental studies that can make a unique contribution to the field.

Throughout the planning for the CESP, we have sought to be as inclusive as possible. We believe that the science/policy focus provides opportunities for faculty from all relevant disciplines within the University to come together on projects of mutual interest. We will seek to build upon the already well established strength and reputation of our current faculty in environmental research, particularly in the natural sciences. The idea is not to displace existing

projects and programs, nor to emphasize certain disciplines and marginalize others. Rather, the idea is to coordinate relevant on-going efforts where appropriate, and to expand opportunities for interested faculty and students. The Center is intended to provide a structure to support faculty working in interdisciplinary teams on environmental issues. Many of our faculty are now engaged in environmental work in other countries and across political boundaries, and we expect that, as a result of these and future faculty initiatives, the CESP will be significantly involved with international issues.

In selecting a name for the Center, the advisory committee wished to communicate to relevant audiences (including prospective students and their parents, potential employers, grantors, and other academics) that our work recognizes the interconnectedness of elements within natural systems and between developed and undeveloped areas. We also sought to indicate that the Center would concern itself with the study of issues both regional and global in scope, and embrace all relevant scientific and policy disciplines. While no single word or phrase can fully capture this inclusive agenda, after long discussion the committee concluded that the term "ecosystem" in the Center's name best expresses these notions.

### INTERDISCIPLINARY FACULTY RESEARCH IN THE CESP

Today there is faculty research underway throughout the University that has relevance to the purpose of the CESP, but in many instances those engaged in this work are operating without any knowledge of or connection to their colleagues engaged in related projects. The CESP will make connections among faculty in relevant science and policy disciplines, and encourage work by interdisciplinary teams in a way that enhances the effort of each participant and the usefulness of the overall effort.

Each year faculty will be invited to participate as fellows of the Center for a semester. Those selected will be provided released time from teaching, research assistance, and travel support to work on interdisciplinary projects in the CESP. The CESP will also provide seed money to interdisciplinary teams of faculty to support development of projects and securing extra-mural funding for them.

Nine new faculty members will be hired in various science and policy fields, to serve as permanent fellows of the Center. The goal in adding faculty is to secure expertise in fields that complement our current strengths.<sup>1</sup> The new faculty members will be hired into existing schools

---

<sup>1</sup> The advisory committee believes that hiring from among following areas will serve to enhance our existing resources; in particular, we believe that adding faculty with expertise in land surface processes complements our internationally recognized strength in marine and atmospheric science. The following list of potential hires is intended merely to illustrate the thinking of the advisory committee to date as to where we might usefully add expertise:

A hydrologist with expertise in surface water chemistry to pursue the dynamics of environmentally important molecules in water. Of particular concern are nutrients, such as nitrogen and phosphorous, and toxins like mercury that occur in the waters of sensitive ecosystems.

An ecologist whose work will focus on the impact of changes in the quantity, distribution, and quality of surface waters on plant and animal populations within ecosystems.

An expert in modeling and analyzing the terrestrial carbon cycle, whose work will complement and benefit from work underway on the carbon economy of the oceans.

An invasion ecologist with expertise in the establishment, spread and impacts of non-native species.

A soil ecologist focused on interactions between plants occurring below ground and their effects upon surface biodiversity and productivity.

and departments of the University, following their established criteria and processes, and promotion and tenure decisions will be made through the home school or department. On average, the CESP will pay 60 percent of the salary and start-up expenses for each new faculty member. The Provost has assured us of the University's commitment to this level of funding for as long as the faculty member remains a fellow of the CESP. The new faculty will be added only in schools or departments that seek the additional hires. Thus we cannot know at this time the specific areas of expertise of the permanent Fellows who will be hired. The CESP will work with the home schools and departments in recruiting and mentoring the new faculty, recognizing that hiring and tenure decisions relating to them must rest with those schools and departments. The first new faculty member has been hired in the School of Law.

#### SEMINARS, COLLOQUIA, AND OUTREACH PROGRAMS

The Center will bring to the University environmental experts from this and other countries to interact with students and faculty as visiting scholars from academia or practice. Each year the CESP will present small seminars and larger colloquia, bringing together experts who are pursuing similar projects in the U.S. and other countries, to discuss common interests and exchange lessons learned. We hope to find ways for faculty and students to work on programs to expand public awareness and understanding regarding the interactions of science and policy in the environment, working in partnership with community groups and the Miami-Dade County schools on selected projects.

#### CENTER GOVERNANCE

Two co-directors, one a scientist and one a policy expert, will be selected by the Provost to administer the CESP. Professor Mary Doyle and RSMAS Dean Otis Brown will serve as the Center's initial co-directors. Former dean of the U.M. School of Law, Professor Doyle has had extensive government experience in environmental work. Most recently, she served as Assistant Secretary of the Interior, and was instrumental in drafting and securing Congressional passage of the legislation authorizing the Everglades restoration. Professor Doyle also chaired the South Florida Ecosystem Restoration Task Force, made up of federal, state, local and tribal officials with responsibility for the Everglades. RSMAS Dean Otis Brown will serve as co-director during the Center's start-up period. Dean Brown is an internationally renowned oceanographer, with special expertise in observations obtained from earth-orbiting satellites. He is a member of the Science Advisory Board of the National Oceanic and Atmospheric Administration, the University Corporation for Atmospheric Research Board of Trustees, the Southeastern Universities Research Association Board of Trustees, and the Ocean Research Leadership Council.

Once the CESP Charter is approved, the Provost, after consultation with the appropriate deans and the Center leadership, will appoint a 15-member faculty advisory committee, made up of representatives of participating schools and departments. In making these appointments, the

---

A natural resource economist to assess and predict the impacts of possible changes in the physical environment on sectors of the economy such as tourism and agriculture, and on the quality of urban life.

A political scientist with expertise in state-federal relations and environmental dispute resolution.

An expert in public administration who focuses on the function and interaction of environmental agencies, and methods for evaluating and incorporating scientific opinion in forming public policy.

An architect or planner concerned with the connections between the developed and undeveloped environments.

An anthropologist or sociologist experienced in cultural and cognitive issues, such as the effect of the perception of risk on environmental decision-making under conditions of uncertainty.

Provost will consider the experience, expertise and commitment to interdisciplinary approaches of potential members and create a committee that represents a balance of science and policy disciplines. Advisory committee members will serve three-year terms.<sup>2</sup> The advisory committee will meet monthly and consider the faculty to be recruited (in conjunction with the home school/department), curriculum program development and other policy issues. The committee will advise the Center's directors on the selection of faculty members to be fellows of the Center; no fellow will be appointed unless a majority of the committee approves. Any member of the committee is eligible for selection as a fellow of the Center, but that member must recuse himself or herself from advising on the selection when he or she is a candidate for appointment. At 18-months intervals, beginning with its creation, the advisory committee will submit a written report to the Provost evaluating the initiatives and accomplishments of the Center during the preceding 18 months, and evaluating the performances of the Center's directors.

## BUDGET

The CESP will be financed through a combination of University operating funds, and gifts and grants from outside sources. We estimate that the Center will cost approximately \$2.2 million in its first full year of operation. When fully staffed and underway, which we believe will take a period of four years to achieve, the Center's annual operating cost is estimated at around \$2.8 million. The University will make a contribution of \$1 million annually in the first three years, this amount to be matched from private sources. Starting in the fourth year, when the Center is fully operational, the University's annual contribution will be \$1.6 million.

A budget for the CESP's first four years of operations is attached. We have tried to be conservative in constructing the budget, especially in estimating income. Extramural grant funding, which we can expect to be generated by new faculty in the sciences, is not included. Many of the budgeted costs are discretionary and thus contingent on generation of sufficient revenues.

We will seek to raise an endowment of approximately \$14 million, the income from which will be used to support CESP operations. The University's advancement staff finds this to be a realistic fundraising goal, to be pursued as a high priority in the University's forthcoming capital campaign.

---

<sup>2</sup> The 15 initial appointments will be for 1 (5 persons), 2 (5 persons) or 3 (5 persons) year terms. Appointments thereafter shall be for three-year terms.

## CENTER (CESP) BUDGET

Years 1-4

<b>INCOME</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
<b>UM Budget</b>	1,000,000	1,000,000	1,000,000	1,600,000
<b>Matching Gift(s)</b>	1,000,000	1,000,000	1,000,000	
<b>Endowment Income</b>			200,000	400,000
<b>Added Tuition Revenue</b>		90,000	220,000	440,000
<b>Grants and Gifts</b>	210,000	400,000	500,000	500,000
<b>Anticipated Extra-Mural Funding<sup>3</sup></b>			350,000	700,000
<b>Total Income</b>	<b>\$2,210,000</b>	<b>\$2,490,000</b>	<b>\$2,920,000</b>	<b>\$2,940,000</b>

<b>EXPENSES</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
<b>New Faculty</b>	234,000	497,700	756,500	794,300
<b>Center Faculty</b>	431,000	453,000	475,100	498,800
<b>Grad Assts</b>	33,000	34,700	36,400	38,200
<b>Staff</b>	75,000	135,000	139,000	143,000
<b>Center Fellows</b>	182,000	191,000	200,000	209,000
<b>New Faculty Startup</b>	144,000	259,500	237,640	
<b>Seminars, etc.</b>	221,000	525,000	525,000	525,000
<b>Faculty Pilot Projects</b>	100,000	125,000	125,000	125,000
<b>Undergraduate Program</b>	140,000	124,000	120,000	140,000
<b>Space</b>	582,000			
<b>Travel, Publications, etc.</b>	65,000	115,000	118,400	121,900
<b>Visiting Scholars</b>			75,000	150,000
<b>Outreach</b>		30,000	50,000	100,000
<b>TOTALS</b>	<b>\$2,207,000</b>	<b>\$2,489,900</b>	<b>\$2,858,040</b>	<b>\$2,850,200</b>

<sup>3</sup> Anticipated extra-mural funding is not currently being calculated to affect base funding. To the extent such extra-mural funding is later secured, it will supplant funding from the UM budget.

## BUDGET NOTES

### YEAR 1

New Faculty: One new scientist @150,000; two new policy @120K; 60% paid by Center (Includes fringe benefits)

Center Faculty: 2/3 time of Director and Assoc Director paid by Center; Director of undergraduate programs 100% paid by Center

Grad Assistants: One @\$33,000; to assist directors with research, planning and other activities (Includes tuition and fringe benefits)

Staff: One secretary @ \$40,000; webmaster @ \$35,000 on contract basis

Center Fellows: 4 per year (2 per semester), half science and half policy. Assume Center will pay 40% of each Fellow's annual salary plus \$8,000 travel expenses (\$2,000 per Fellow); \$62,000 for research assistants' \$4,000 collaboration support (\$1,000 per Fellow)

New Faculty Start-up: One scientist @200K; two policy @20K; 60% paid by Center

Seminars: Three (3) guest lectureships (@7,000; two-3-day seminars for resource managers (200K)

Faculty Pilot Projects: Small grants (\$20,000-25,000) to interdisciplinary teams of faculty to be used as seed money in developing funded research projects

Undergraduate Program: Halftime secretary (\$19,000); one teaching asst. (\$20,000); computers, lab equipment, van and boat rental (\$101,000) (Includes fringe benefits)

Space: Total 5,300 sq. ft. located on campus. Three Director's offices with desks outfitted, 900 sq. ft. total (\$15,000); one staff office with desk outfitted, 200 sq. ft. (\$4,000); two offices for Fellows with desk outfitted, 400 sq. ft. total (\$8,000); two offices for visiting scholars/research asst's with desk outfitted, 400 sq. ft. (\$8,000); two conference rooms, one 1,000 sq. ft., one 500 sq. ft. with communications capability (\$150,000); renovation of 5300 sq. ft. (\$398,000)

Travel, Publications, etc.: Directors' travel (\$20,000); publications like advertising meetings and producing case studies (\$10,000); external advisory committee (\$35,000)



**YEAR 2**

Assume inflation factor of 5% for faculty; 3% for everything else

Assume 5 additional undergraduates enrolled generating \$90,000 net increase in tuition revenue

New Faculty: Two scientists @\$150,000; one policy @\$120,000; 60% paid by Center (Includes fringe benefits)

Staff: Add meeting planner/outreach person @\$60,000

New Faculty Start-up: Two scientists @\$200,000 plus 3%; one policy @\$20,000 plus 3%; 60% paid by Center

Seminars: Add one 3-week summer seminar @\$300,000

Undergraduate Program: Half-time secretary (\$19,000); one teaching asst. (\$20,000); computers, lab equipment, van and boat rental (\$85,000) (Includes fringe benefits)

Travel, Publications, etc.: Add newsletter @\$50,000

**YEAR 3**

New Faculty: One scientist @\$150,000 and two policy @\$120,000, all increased for inflation; 60% paid by Center (Includes fringe benefits)

Assume 13 additional undergraduates enrolled generating \$220,00 net increase tuition revenue

New Faculty Start-up: One scientist @\$200,000; two policy @\$20,000, all increased for inflation; 60% paid by Center

Undergraduate Program: One secretary (\$40,000); two teaching assts. (\$40,000); equipment, van and boat rental (\$40,000) (Includes fringe benefits)

**YEAR 4**

Center is fully functional

Assume 26 additional undergraduates enrolled in Center program generating \$440,000 net increase in tuition revenue; assume 90-100 new students enrolled by Year 8

Undergraduate Program: One secretary (\$40,000); two teaching assts. (\$40,000); equipment, van and boat rental (\$100,000) (Includes fringe benefits)

Add Visiting Scholars (\$150,000 not adjusted for inflation)

Outreach function added (\$177,000 not adjusted for inflation)

# **CHARTER**

## **CENTER FOR ECOSYSTEM SCIENCE AND POLICY**

### **Mission**

The principal mission of the center for Ecosystem Science and Policy ("CESP") is to create innovative, interdisciplinary initiatives designed to bridge the gap between science and policy in the environment.

### **Center Objectives**

The CESP will fulfill its mission through encouraging interdisciplinary faculty research and hosting seminars, colloquia and outreach projects on a regular basis. The CESP will also develop detailed plans for an undergraduate program, which will be submitted for approval at a future time.

### **Background**

Environmental policy and management cannot successfully be advanced or sustained unless demonstrably based upon the best available science. Science has shown us that the complex connections within and among earth's components must be considered in environmental policy-making. Frequently it is necessary to act in the face of scientific uncertainty. This means that scientists and decision-makers have to work in close collaboration to solve environmental problems. They need to communicate effectively, to ask for and receive salient advice, and to resolve scientific and related political disputes. The interaction of science and policy provides an effective focus for an inter-disciplinary center for environmental studies at the University of Miami that can make a unique contribution to the field.

### **Staffing & Governance**

Faculty will be invited to participate as fellows of the Center for a semester. Those selected will be provided released time from teaching, research assistance and travel support to work on interdisciplinary projects in the CESP. The CESP will also provide seed money to interdisciplinary teams of faculty to support development of projects and securing extra-mural funding for them. Nine new faculty members will be hired to serve as permanent fellows of the Center in various science and policy fields that complement our current strengths. The new faculty will be hired into existing schools and departments of the University, following their established criteria and processes, and promotion and tenure recommendations will be made through the home school or department in consultation with the CESP. On average, the CESP will pay 60 percent of the salary and start-up expenses for each new faculty member. Two co-directors, one a scientist and one an expert in environmental policy, will be selected by the Provost to administer the CESP. Staff will include a secretary, a meeting planner/outreach person and a webmaster retained on a contract basis.

---

The Provost, after consultation with the appropriate deans and the Center leadership, will appoint a 15-member Faculty Advisory Committee of representatives of participating schools and departments. Faculty Advisory Committee members will serve staggered three-year terms. The Faculty Advisory Committee will meet regularly to consider faculty hiring, curriculum, program development and other issues. At 18-month intervals, the Faculty Advisory Committee will submit a written report to the Provost evaluating the initiatives and accomplishments of the Center and evaluating the performance of the Center's directors.

**Funding**

The CESP will be financed through a combination of University operating funds, and gifts and grants from outside sources.

---