Society for College and University Planning
www.scup.org

# Got Sustainability? Plan for It!

## *Making Sustainability a Foundation of Higher Education Learning and Practice*


*A live, interactive telecast/ webcast on October 9, 2003*

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**Society for College and University Planning**
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### Acknowledgements

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## Virtual Resources

We have more to share, but this printed handout is already too large! Please view the many additional resources on line at **www.scup.org/sustainability/telecast2003/**. There you will find links to the following, and more:


### Articles

**Environmental Management Systems: A Framework for Planning Green Campuses**, by Julian Keniry, from *Planning for Higher Education*, March–May 2003 (8 pages)

**Planning to Learn**, by David W. Orr, from *Planning for Higher Education*, March–May 2003 (5 pages)

**How Green Is Green? Developing a Process for Determining Sustainability When Planning Campuses and Academic Buildings**, by Anthony Bernheim, from *Planning for Higher Education*, March–May 2003 (8 pages)

**Education for Sustainability: Content, Context, and Process of Learning and Research**, from Second Nature (6 pages)

**The University Modeling Sustainability as an Institution: Planning, Operating, and Purchasing for the Future**, from Second Nature (8 pages)

### Links

Plus links to our endorsing and sponsoring organizations.

# Society for College and University Planning

September 9, 2003

Dear Participant:

The Society for College and University Planning (SCUP), a network of nearly 5,000 higher education leaders, is proud to welcome you to "Got Sustainability? Plan for it! Making Sustainability a Foundation of Higher Education Learning and Practice."

This live, interactive event provides an opportunity for faculty, staff, and students to spend time together learning about how higher education institutions can not only conduct research regarding sustainability—the need for it and ways to bring about, but also provide a learning environment where sustainability principles are part of the curriculum in every possible discipline, and where the institution itself models best practices in green design and sustainable operations.

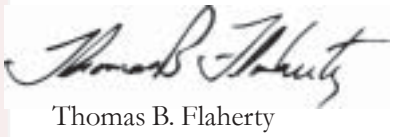
Why now? Daily, we hear of new indications of a global warming trend and of new species extinctions. The impact of humans on climate is so strong that scientists now recognize the "weekend effect"—where the temperature of the nearby ocean fluctuates with the human work week. Massive power outages around the world reflect the increasing energy demands of a growing population. Recent news reports coincide with warnings of a more and more acidic ocean and subsequent species die-off. Other reports anticipate three times as many cars and trucks on the road in thirty years as there are now.

Why SCUP? SCUP is uniquely located at the junction of planning for the campus physical infrastructure, planning for budget and resource allocation, and planning for curriculum and for policy. We have found that when one examines sustainability principles and issues with an open mind, then much of what sustainability is about can be seen as the inevitable result of very well-done, integrated planning. Sustainability does not simply mean, in the words of the keynote speaker at SCUP's 2001 annual, international conference and expo, William McDonough, "doing less bad." It means finding ways, sometimes very creative ways, to live off of nature's interest, not its capital.

We anticipate many more questions than time will allow for live responses. If you care to join SCUP's online Sustainability Knowledge Community, you will find that questions which cannot be answered during the telecast/webcast will be answered on the Lyris-based email discussion list on which that community resides. Find out more at www.scup.org/communities, or join the list by sending an email message to "scup-sustainability-requests@umich.edu" with the word "subscribe" in the subject line of your message.

SCUP wishes to acknowledge the support of the telecast endorsers and sponsors, who are listed on the front page of this document. The expertise and hard work of SCUP's Sustainability Task Force, also listed on the cover, has been invaluable for SCUP as it has embraced sustainability and higher education as one of the most important issues on which to focus the Society's resources and attention.

Thank you for joining us today, we look forward to a lively and informative program.



Thomas B. Flaherty
President

Jolene L. Knapp
Executive Director

The mission of the Society for College and University Planning is to provide higher education professionals with planning knowledge, resources, and connections to achieve institutional goals.

**Society for College and University Planning**
***Got Sustainability? Plan for It!***

## Program Goals

This two-hour event for senior academic, operations and facilities administrators, planners, faculty, and students is designed to assist leaders in understanding:

What sustainability is and its importance for a secure and civil society

The critical role of higher education in creating a sustainable world

Strategies for making sustainability a foundation of higher education learning and practice

The role of institutions in creating the transformative changes needed in higher education

## Program Overview

### Why: Sustainability and the Critical Role of Higher Education

- "Connections" & Introduction to the importance of sustainability to society and higher education
- Discussion of program content and format, goals and introduction of panelists
- Panel discussion
- What sustainability means and implies for society and the urgency to make it the organizing theme for thinking and action.
- Critical role of higher education in transforming societal mindset
- Higher education as a fully integrated system with sustainability as a foundation of all teaching, research, operation, planning, purchasing, investments and collaboration with local and regional communities.
- Why higher education must care
- Audience Q & A (10 minutes)

### 10-minute Break

### What: What Are We Doing, What Can We Do Better

- Modeling sustainability in operations - energy, water, waste, transportation, purchasing
- Modeling sustainability  in campus and facilities planning and design
- Audience Q&A (15) minutes
- Changes in teaching & learning (content, context, process) (10 minutes)
- Audience Q&A (5) minutes

### Wrap-up

# The Critical Role of Higher Education in Creating a Sustainable Future

*Higher education can serve as a model of sustainability by fully integrating all aspects of campus life.*

**by Anthony D. Cortese**

**Anthony D. Cortese** is a sustainability consultant and president and cofounder of Second Nature, a national nonprofit organization in Boston, Massachusetts, that works to make sustainability a foundation of all learning and practice in higher education. He was formerly the dean of environmental programs at Tufts University and the commissioner of the Massachusetts Department of Environmental Protection.

## Need for a New Human Perspective

For the first time in history, humans are pervasive and dominant forces in the health and well-being of the earth and its inhabitants. We are the first generation capable of determining the habitability of the planet for humans and other species. The limiting factors for future economic growth are not labor and technology (Hawken 1997). They are, instead, natural capital (the size of the fish stock, not the number and size of the fishing boats) and social capital (the ability to make market corrections and to govern society to achieve health, peace, security, social equity, and stability).

## Envisioning a Sustainable Future

Imagine a society in which all present and future humans are healthy and have their basic needs met. What if everyone had fair and equitable access to the Earth's resources, a decent quality of life, and celebrated cultural diversity? Imagine future scientists, engineers, and business people designing technology and economic activities that sustain rather than degrade the natural environment and enhance human health and well-being. Imagine a future where we design our technology inspired by biological models operating on renewable energy. Imagine a future where the concept of waste is eliminated because every waste product is a

raw material or nutrient for another species or activity or returned into the cycles of nature. Imagine that we are managing human activities in a way that restores and increases the biological diversity and complexity of the ecosystems on which we all depend. By doing so, humans could live off nature's interest, not its capital, for generations to come.

Imagine that all professionals understand their connections to the natural world and to other humans. What if people truly know where products and services come from, know where wastes go, and know the consequences to humans and other living species and how to minimize this ecological footprint (our impact on the Earth)?

The average American does not know that we consume our body weight in solid materials daily. For every 100 pounds of product produced in the United States, we actually move a staggering 3,200 pounds of material and energy, over 94 percent of which goes to waste before we ever see the product or the service (Hawken 1997). Our ecological footprint is largely invisible to most of us. We must make it visible to understand our impact.

Imagine a future in which we have stabilized the population at a level that is within the carrying capacity of Earth's ecosystems because we have increased the education, as well as the social and economic status, of women worldwide. Imagine that we have timely and accurate economic and ecological signals: microeconomic signals for price that reflect the true social and environmental cost to society, macroeconomic indicators that reflect the true well-being of society and the Earth, and ecological signals that we receive in time to prevent or remedy damage to humans or the environment. Current signals are either incomplete, highly inaccurate, lead us to a false sense of security, or are too late to prevent damage.

Now, imagine that all current and future generations are able to pursue meaningful work and have the opportunity to realize their full human potential both personally and socially. Imagine that through our dreaming and doing we have dramatically reduced resource consumption, pollution, and waste. Imagine we have done this in the developed world so that there is opportunity in the developing world and poorer communities within the United States to be healthy and have a decent quality of life. Imagine that communities are strong and vibrant because they celebrate cultural diversity, are designed to encourage collaboration and participation in governance, and emphasize the quality of life over the consumption of stuff. Think of what it could be like if globalization is humanized to support democracy, human rights, and economic opportunity for everyone.

The vast majority of people would agree with these ideals. So how do we rapidly accelerate these ideas and create this future? We need a fundamental, transformative shift in thinking, values, and action by all of society's leaders and professionals, as well as the general population. To quote Albert Einstein, "The significant problems we face cannot be solved at the same level of thinking we used when we created them" (Calaprice 2000, p. 317).

## Higher Education's Role

The change in mind-set necessary to achieve this vision is a sustained, long-term effort to transform education at all levels. Despite the efforts of many individuals and groups within the formal educational system, education for a just and sustainable world is not a high priority. (McIntosh et al. 2001). Indeed, it is the people coming out of the world's best colleges and universities that are leading us down the current unhealthy, inequitable, and unsustainable path. Only a few architecture schools have made sustainable design a foundation of education and practice (Glyphis 2001). The same is true in the education of virtually every intellectual discipline and profession. The greatest evidence of the need to transform education is the state of the world and the tremendous effort being made by thousands of nongovernmental organizations (NGOs) and schools in environmental and sustainability education to "fix" the traditional educational system.

Why is this the case? Several structural aspects of the current system contribute to the problem. Interactions between population, human activities, and the environment and strategies, technologies, and policies for a secure, just, and an environmentally sustainable future are among the most complex and interdependent issues with which society must deal. These issues cross over disciplinary boundaries. Higher education is generally organized into highly specialized areas of knowledge and traditional disciplines. Designing a sustainable human future requires a paradigm shift toward a systemic perspective emphasizing collaboration and cooperation. Much of higher education stresses individual learning and competition, resulting in professionals who are ill prepared for cooperative efforts. Learning is fragmented, and faculty, responding to long-established incentives (e.g., tenure, research) and professional practices, are often discouraged from extending their work into other disciplines or inviting interdisciplinary collaboration.

As a result, much higher education curricula tends not to ask students to challenge the following common assumptions:

- Humans are the dominant species and separate from the rest of nature.
- Resources are free and inexhaustible.
- Earth's ecosystems can assimilate all human impacts.
- Technology will solve most of society's problems.
- All human needs and wants can be met through material means.
- Individual success is independent of the health and well-being of communities, cultures, and the life support system.

> The kind of education we need begins with the recognition that the crisis of global ecology is first and foremost a crisis of values, ideas, perspectives, and knowledge, which makes it a crisis *of* education, not one *in* education. (Orr 1994, p. 5)

Higher education institutions bear a profound, moral responsibility to increase the awareness, knowledge, skills, and values needed to create a just and sustainable future. Higher education plays a critical but often overlooked role in making this vision a reality. It prepares most of the professionals who develop, lead, manage, teach, work in, and influence society's institutions, including the most basic foundation of K–12 education. Besides training future teachers, higher education strongly influences the learning framework of K–12 education, which is largely geared toward subsequent higher education.

Higher education has unique academic freedom and the critical mass and diversity of skills to develop new ideas, to comment on society and its challenges, and to engage in bold experimentation in sustainable living. Why, then, is it so averse to risk and difficult to change? Because the change sought is a deep cultural shift— the most difficult to achieve—but one of the most important leverage points for institutional transformation (Meadows 1997). Leo Tolstoy provides some insights into the difficulty of relinquishing the inner realities required for such a change:

> I know most (people), including those at ease with problems of the greatest complexity, can seldom accept even the simplest and most obvious truth if it would be such as would oblige them to admit the falsity of conclusions which they have delighted in explaining to colleagues, which they have proudly taught others, and which they have woven, thread by thread, into the fabric of their lives. (Bridges 2001, p. 17)

## Education for the 21st Century

What if higher education were to take a leadership role, as it did in the space race and the war on cancer, in preparing students and providing the information and knowledge to achieve a just and sustainable society? What would higher education look like? The education of all professionals would reflect a new approach to learning and practice. A college or university would operate as a fully integrated community that models social and biological sustainability itself and in its interdependence with the local, regional, and global communities. In many cases, we think of teaching, research, operations, and relations with local communities as separate activities; they are not (see figure 1).

Because students learn from everything around them, these activities form a complex web of experience and learning (see figure 2).

All parts of the university system are critical to achieving a transformative change that can only occur by connecting

Figure 1 **General Practice of Higher Education**

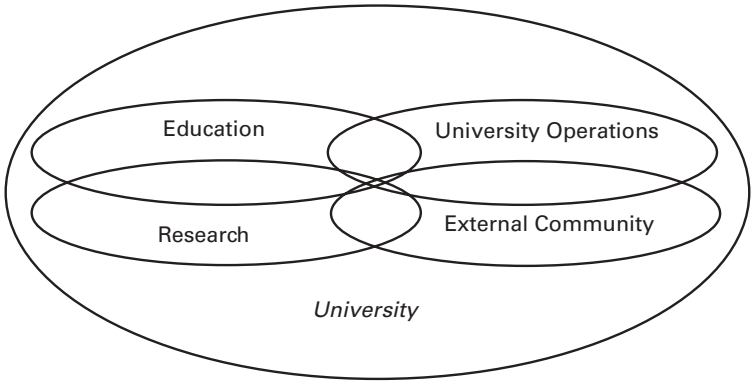
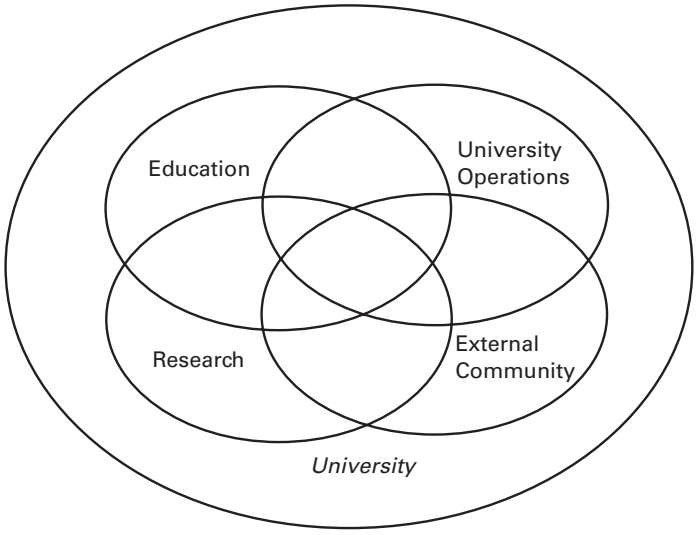


Figure 2 **Higher Education Modeling Sustainability As a Fully Integrated System**




head, heart, and hand. "However well-intentioned, formal education cannot compete with the larger educational effects of highways, shopping malls, supermarkets, urban sprawl, factory farms, agribusiness, huge utilities, multinational corporations, television and non-stop advertising that teaches dominance, speed, accumulation and self-indulgent individualism" (Orr 2002, p. 31). To graduate students who can overcome this larger, pervasive form of learning, the educational experience of graduates must reflect an intimate connection among curriculum and (1) research; (2) understanding and reducing any negative ecological and social footprint of the institution; and (3) working to improve local and regional communities so that they are healthier, more socially vibrant and stable, economically secure, and environmentally sustainable.

Just imagine if, in the 21st century, the educational experience of all students is aligned with the principles of sustainability. To achieve this, the *content of learning* will require interdisciplinary systems thinking, dynamics, and analysis for all majors, disciplines, and professional degrees.

This kind of thinking is critical to addressing environmentally sustainable action on local, regional, and global scales over short, medium, and intergenerational time periods. Education would have the same "lateral rigor" across, as the "vertical rigor" within, the disciplines. Compartmentalized knowledge without connection to larger system interactions results in viewing many interdependent challenges as separate, hierarchical, and competitive. The net results are often unintended narrow, ineffective solutions, or worse, more harmful to people and the environment in another place or another time. For example, a Toyota Prius is a gasoline-electric hybrid vehicle that uses one-quarter of the gasoline and emits one-eighth of smog-producing emissions of sports utility vehicles and light trucks. Without larger systems thinking, driving a Prius would seem like a good environmental solution. However, it would not reduce traffic. Nationally, vehicle miles of travel have risen 70 percent from 1980 and some recent studies in 68 cities demonstrate that 90 percent of the increased capacity of urban highways is used up within five years (Texas Transportation Institute 2001). Driving a Prius does not reduce noise or safety problems, reduce paving over of green space or sprawl, or help with the social justice problems of poor people without access to jobs in the suburbs and exurbs (areas beyond urban suburbs that are subject to rapid development) that are not served well by public transportation. Indeed, if everyone drove a Prius, many of these problems could be made worse because people would feel they were doing a good thing driving this environmentally friendly car. The larger issue is to think upstream about how to solve all these problems in a systemic way and reduce the need for driving. A better solution provides people access to jobs and activities while minimizing the adverse health, ecological, and social footprint.

Understanding how the natural world works and learning how to have human technology and activity mimic and live within the limits of natural systems are crucial to education for citizenship in the 21st century. Imagine if all students knew how to operate on renewable energy and eliminate the concept of waste by making every waste product a raw material or nutrient for another species or activity or return it into the cycles of nature (McDonough and Braungart 2002). This is part of the concept of *industrial ecology*. In her book *Biomimicry*, Janine Benyus (1997) argues for using nature as mentor, model, and measure, "because animals, plants and microbes are the consummate engineers. They have found out what works, what fits in and what lasts here on Earth. After 3.8 billion years of R&D, failures are fossils, and what surrounds us is the secret to survival" (p. 3).

The content of education will include ways to preserve and restore cultural and biological diversity, both of which are critical to a sustainable future. This will mean learning how

to live off nature's interest, not its capital (e.g., practicing sustainable agriculture, fishing, forestry).

The *context of learning* will change to make human/environment interdependence, values, and ethics a seamless and central part of teaching of all the disciplines, rather than isolated as a special course or module in programs for specialists. All students will understand that we are an integral part of nature. They will understand the ecological services that are critical for human existence and how to make the ecological and social footprint of human activity visible and as benign as possible (Chambers, Simmons, and Wackernagel 2000; Ryan and Durning 1997). Environmental specialists are necessary but not sufficient. Understanding how to create a just and sustainable society must be a fundamental principle in all education.

The *process of education* will emphasize active, experiential, inquiry-based learning and real-world problem solving on the campus and in the larger community. It is widely known that for long-term retention of knowledge, skills, and values, we retain 80 percent of what we do and only 10 to 20 percent of what we hear or read. For example, as part of the curriculum, the learning experience for students would include working on actual, real-world problems facing their campus, community, government, and industry. The process would also increase group work and learning so graduates will be able to collaborate effectively on complex problems as future managers and leaders.

*Higher education would practice sustainability* (see figure 2). A campus would practice what it preaches and make sustainability an integral part of operations, planning, facility design, purchasing, and investments and tie these efforts to the formal curriculum. The university is a microcosm of the larger community. Therefore, the manner in which it carries out its daily activities is an important demonstration of ways to achieve environmentally responsible living and to reinforce desired values and behaviors in the whole community. These activities provide unparalleled opportunities for teaching, research, and learning. By focusing on itself, the university can engage students in understanding the "institutional metabolism" of materials, goods, services, and transportation and the ecological and social footprint of all these activities. Students can be made aware of their "ecological address," and they can and would be actively engaged in the practice of environmentally sustainable living. Moreover, this is one of the most effective strategies to build a strong sense of collaboration and community throughout the institution—a long-standing central goal for college and university administrators and trustees.

Finally, the learning and benefit to society of higher education forming *partnerships with local and regional communities* to help make them socially vibrant, economically secure, and environmentally sustainable will be a crucial part of successful higher education. Colleges and universities have an obligation to support local and regional communities, making every action lead to community improvement. Higher education institutions are anchor institutions for economic development in most of their communities, especially now that the private sector moves facilities, capital, and jobs frequently as mergers, acquisitions, and globalization become the norm for corporations. The 4,100 higher-education institutions in the United States are, themselves, large economic engines with annual operational budgets totaling $200 billion in 2000, according to *The Chronicle of Higher Education* (2000, p. 7). This is greater than the gross domestic product of all but 25 countries in the world. Higher education's endowment was more than $200 billion in 2000. Imagine the economic leverage if universities were modeling sustainability by purchasing sustainably preferable products and services and how much greater the benefit could be if they were doing joint purchasing with local communities. Utilizing faculty and students to conduct the research as an integral part of the learning experience would greatly enhance their education and promote a strong sense of connection to and caring for the local communities and to the ecosystems of which they are a part. Moreover, there is a strong movement among college and university presidents, deans, and faculty to promote civic engagement and democratic ideals through active faculty and student involvement (Campus Compact 1999).

## Can Higher Education Meet This Challenge?

The issue is not the ability of higher education to take on this challenge; it is the will and the time frame for doing so. Most of the world's major international governmental, scientific, and nongovernmental institutions, as well as many business organizations, agree that the changes needed in individual and collective values and action must occur within the next one to two decades. After all, a child in kindergarten today will graduate from college in 2020. If higher education does not lead the sustainability effort in society, who will?

Fortunately, there are hundreds of examples of changes in all four areas (see figure 2) of higher education activities that shape the total student experience. Many of them are discussed in other articles in this journal. Information about the following examples is available through a number of organizations, including Second Nature (www.secondnature.org), the National Wildlife Federation's Campus Ecology Program (www.nwf.org/campus/ecology), and University Leaders for a Sustainable Future (www.ulsf.org) (Cortese and Benner 2001a, 2001b). The most successful changes are those in which the formal curriculum is an integral part of the other three functions of higher education. Most are driven by faculty and student pressure, but (fortunately) an increasing number are driven by high-level academic administrators and operations executives.

**Environmental and sustainability literacy.** A faculty coalition at Northern Arizona University has developed a concerted effort to strengthen the sustainability effort on the campus, with the goal of reaching the greatest number of students possible. A five-year faculty development program, called the Ponderosa Project, resulted in 80 faculty members revising 120 courses in most disciplines to make sustainability the context for, or content of, learning. The faculty then made sustainability a key thrust of the liberal studies requirement for all majors. This program is very similar to the faculty development program of the Tufts Environmental Literacy Institute initiated in 1990.

At a workshop for faculty from a consortium of 17 historically black colleges and universities and institutions serving other minorities, representatives from the Chlorine Chemical Council and Greenpeace debated the use of chlorine compounds in society. After a brief question and answer period, participants were given sufficient time to individually brainstorm how they could incorporate the chlorine controversy into classes that they were currently teaching. They then went back to their campuses and made significant course revisions. Figure 3 identifies some of the courses and areas of the college in which this issue could be successfully engaged.

**Curriculum incorporating environmentally sustainable design on campuses.** Through the Green Design Initiative, Carnegie Mellon University intends to reach students at many levels: high school through graduate and lifelong learning. The university has developed the Environment Across the Curriculum Program that offers all Carnegie Mellon students a basic introduction to environmental issues. Undergraduate and graduate students at Carnegie Mellon are offered elective courses that provide a deeper understanding of scientific, engineering, economic, social, and policy issues relating to the environment. Furthermore, special opportunities exist for talented undergraduates to work with faculty and graduate students on Green Design research projects.

Under the direction of David Orr, Oberlin College has designed the Adam Joseph Lewis Center for Environmental Studies, one of the most environmentally sustainable buildings at any university. This building

- utilizes natural light extensively,
- did not use any known toxic building materials in its construction,
- is completely solar-powered and will eventually provide excess energy for the campus,

Figure 3 **Historically Black Colleges and Universities/Minority Institutions Consortium Curricula**

- Personnel Administration
  *Tuskegee University*
- Critical Reading and Writing
  *Northern Arizona University*
- Introduction to Linguistics
  *Northern Arizona University*
- Introduction to Sociology
  *Xavier University*
- American Government
  *Clark Atlanta University*
- International Relations
  *Clark Atlanta University*
- Environmental Economics
  *Tuskegee University*
- Materials Science
  *Florida International University*
- Enviro-toxicology I and II
  *Florida A&M University*
- General Chemistry
  *Tuskegee University*
- Chemical Engineering
  *Hampton University*
- Chemical Engineering Seminar
  *Hampton University*
- Environmental Analytical Chemistry
  *Hampton University*
- Clinical Chemistry
  *Xavier University*
- Ecology
  *Howard University*

- causes no air pollution,
- has effluent water that meets U.S. Environmental Protection Agency standards for drinking water quality,
- has grounds that were landscaped in a manner that would utilize native species of plants and promote biological diversity.

For more than five years, 250 students were involved in every aspect of the planning and design of the building and interacted with dozens of different design professionals and vendors in the Oberlin town community. This was done through a class specifically developed for this purpose.

**Curriculum involving improvement in local communities.** Unity College, a small, private, liberal arts college in Unity, Maine, has developed an entire curriculum around the study of one beloved place: Lake Winnecook. The Unity community was concerned about the water quality of the lake. The college's community service office took the lead in creating a cross-disciplinary program that involves courses and students from all areas of the college as well as community members and organizations. Each of the courses listed in figure 4 participates in the project, integrating the study and concern for the lake into course themes. Students learn about the local community, their ecological address, and how human activities are interdependent with the rest of nature. They also develop skills for engaging in sustainable living.

**Expanding and improving architectural education.** In August 2001, the deans and faculty of several prestigious architectural schools; some of the country's leading architects; and representatives from all architectural professional and accreditation organizations, well-respected NGOs, and charitable foundations convened at the Wingspread Conference Center in Racine, Wisconsin. The 38 participants focused on sustainable design in architectural education and practice, given the large impact of the built environment on humans and the natural world and estimates that the built environment will double in size in the coming decades. Their recommendations call for several changes in architectural education and practice including:

- An expanded role for architects as design team leaders involving a wide range of design professionals, property owners, and building inhabitants and residents from the surrounding community in the earliest stages of planning and design as well as through the design and construction process
- Practicing sustainable design for community, landscape, and building design (including understanding the local and regional environmental contexts; the complex network and impact of materials and construction; and the cultural, social, and economic contexts)
- A broad-based effort to make sustainable design a core part of all architectural education in the next decade (Glyphis 2001)

Several organizations involved in the conference are now involved in planning for and implementing several of the conference proceedings.

## The Implications for College and University Planners

This kind of broad transformative change and leadership in higher education has large implications for college and university planners. Taking the educational experience from a theoretical to a practical level will have an impact on the

Figure 4 **Unity College Curricula**

- Introduction to Drama
- Biology II
- Environmental Pollution
- Freshwater Ecology
- Ichthyology
- Microbiology
- Analytical Chemistry
- Environmental Education
- Advanced Oral Communications
- Composition II
- Introduction to Aerial Photography
- Geology of Environmental Problems
- Environmental History of the World
- Great Issues in World Civilization
- Instruction and Evaluation
- Land and Water Law
- Introduction to Interpretation
- Advanced Interpretation
- Fisheries Science
- North American Wildlife
- Statistics I
- Statistics II

way the academy will interact with the external community. This shift will certainly affect the leaders who are necessarily the most interdisciplinary and long-range thinking and connected to the decision-making structure of higher education. College and university planners have the unique ability and unprecedented responsibility to help higher education fulfill its responsibility to create a healthy, just, and sustainable world. Planners will be important in making colleges and universities "learning organizations" (Orr 2002, p. 31). Planners must focus as much on the education and research being done in higher education as on the physical, operational, and external community functions of the university and do so in an integrated, interdependent manner. This is profound. I believe that a college or university that models sustainability in all its operational functions and actions to collaborate with local and regional communities but does not involve the faculty and students as an integral part of the educational process will lose 75 percent of the value of its efforts and cannot fulfill its role in society.

Planners must be able to understand and articulate the necessity and advantages of higher education institutions being leaders in creating a sustainable society to a wide variety of stakeholders. These include internal decision makers and other stakeholders (e.g., faculty, operational personnel, students) and external stakeholders (e.g., parents, alumni, local and regional communities, future employers, funders of education and research, and accreditation organizations). Following are some of the important advantages:

- Improved learning for all—inside and outside higher education
- Students prepared for citizenship and career
- Increased external respect
- Attraction of students, faculty, and funding
- Reduced economic, social, and environmental costs
- Cooperation and satisfaction across the university
- Fulfillment of higher education's moral and social responsibilities

We know the steps. If we are willing, this future is possible. Through our imagination, the Society for College and University Planning can become a critical linchpin in making sustainability a foundation of all higher education and practice.

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# From the SCUP Sustainability Task Force

by **Nancy Tierney**

While issues of sustainability and green design are becoming increasingly important, it is apparent that sustainable practices in industrialized countries are quite limited. The ecological footprint provides evidence of the rapid and accelerating deterioration of the resources on this planet, indicating that human demand exceeds the Earth's ecological capacity. The United States contributes the most to this depletion, with the average American ecological footprint measured at 9.6 global hectares (24 acres) versus the average world citizen rate of 2.3 hectares (5.6 acres) (Redefining Progress 2002).

The 2002 World Summit on Sustainable Development in Johannesburg, South Africa, while highlighting the issues, resulted in a sobering story about developments in the decade since the 1992 Earth Summit in Rio de Janeiro. Lest we categorize sustainability as strictly an environmental issue, there is a strong connection between environmental degradation and poverty that stifles opportunities and reduces quality of life for many people.

Using the words "sustainable" and "development" together might seem contradictory. If one accepts the definition of the Brundtland Commission (World Commission on Environment and Development 1987) report, the combined term makes sense. Sustainable development, according to the report, is "[d]evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs." A simpler and more elegant definition is the Great Law of the Iroquois Confederacy that says "In our every deliberation, we must consider the impact of our decisions on the next seven generations."

In its practice of analyzing trends, the Society for College and University Planning has polled its higher education constituency to identify the pressing issues facing their institutions. The issues one expects to find—e.g., working with limited resources, marketing the institution,

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maintaining aging facilities—are among those identified. In recent years, the topic of sustainability appears on that list as an area of interest among planners of all types. Further, it is an area that can and should affect the entire higher education community, from students to faculty to administrators.

The notion of eco-effectiveness introduced by William McDonough and Michael Braungart (2002) in *Cradle to Cradle* offers an exciting challenge to planners everywhere. Higher education communities should be particularly receptive to these ideas; this is one case where the resources are not constrained. We do not lack people with good ideas and initiative. If one accepts as a challenge that "being less bad is no good," we must figure out how growth can be good.

*State of the Campus Environment*, a survey conducted by the National Wildlife Federation (McIntosh et al. 2001), revealed that a large number of colleges and universities are trying to balance the needs of people and of the environment. The survey found "enhanced environmental responsibility driving decisions in every part of campus life, from waste reduction to purchasing and landscaping." In other words, there's something in this issue for everyone.

In the two years that the SCUP Sustainability Task Force has been organized, I've learned much about sustainability initiatives and about the people dedicated to this movement. Institutional planners who a decade ago had little support for sustainability initiatives now have access to many more resources. Regional organizations spearheaded by Second Nature (an organization that advocates sustainability in education) are springing up around the country, gaining members and support from interested individuals. Institutions are sharing information, and SCUP's conference sessions reflect the interest in sustainability.

To help you better understand this important topic, the SCUP Sustainability Task Force and the *Planning for Higher Education* editorial staff bring you this special issue. We hope that when you finish reading this journal, you'll want to carry the banner of sustainability on your campuses. Thanks to task force members Anthony Bernheim, Trudis Heinecke, Julian Keniry, Camille Kirk, Mary Beth McGrew, Christine Taylor Thompson, Sunny Beach, and co-chair Terry Calhoun and to the journal's executive editor Rodney Rose for their considerable efforts.

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# Introduction

## Sustainability: Taking the Long View

by **Camille M. Kirk**
**Guest Editor**

The number of cars in the world increased at an annual rate of 2.8 percent between 1980 and 1996, faster than the annual rate of population growth during those years (Harrison and Pearce 2001a). Carbon dioxide in the atmosphere has increased about 30 percent over pre-industrial levels (Harrison and Pearce 2001b). If you are reading this article by electric light provided by a coal-fired utility plant, approximately 97 percent of the stored energy in the coal burned for that electricity was wasted in conversion and transmission, leaving only 2 to 3 percent to actually power the light bulb (Harrison and Pearce 2001c). We are losing species in our most populated areas, largely due to habitat loss, at perhaps 100 times the "normal" rate and that is conservatively estimated to increase by at least tenfold in the next 25 years (Harrison and Pearce 2001d).

Many of us have seen similar figures about the human impact on the environment. Our present land use and resource consumption patterns present us with the challenge of meeting our needs without compromising the ability of others, including other species, to meet their needs, now and in the future. This is the moral and practical challenge that the sustainability movement proposes to meet. Higher education is not exempt from this challenge. To the contrary, you will learn in the following pages that higher education has a special obligation to lead the way because it plays a role in producing leaders, policy makers, and citizens of the world. Additionally, it uses a large share of resources on its campuses to carry out the traditional mission of teaching, research, and service.

For some, the term "sustainability" might call to mind buildings with solar panels on the roof, generating off-the-grid electricity. While building design and construction with sustainability in mind leads to fewer environmental impacts and helps conserve resources and money, "green" architecture is not all there is to creating a truly sustainable higher education institution. There are many components of "greening" the campus, from changing the curriculum to mitigating traffic impacts to implementing environmental

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management systems, and finding leaders at all levels on campus to take charge of various sustainability efforts. In this special issue, you will find a wide range of articles by many formative thinkers and experts in the field of sustainable planning.

This issue of *Planning for Higher Education* marks an important step for the Society for College and University Planning. By committing considerable resources to the topic of sustainability in higher education, both with this issue of the journal and with initiatives such as the April 2003 sustainability telecast, SCUP takes a leadership role in both the debate about the role of sustainability in higher education and in the planning and implementation of sustainable programs and projects on campuses around the world.

As planners and leaders, we can ask ourselves what our educational institutions can do differently and better to ensure intergenerational success and well-being. One starting point is what we teach our students and how we practice our teachings. Anthony Cortese describes how higher education can take a leading role in modeling and educating for sustainability, citing examples from colleges and universities around the United States. One impetus for realizing Cortese's vision comes from prospective students. To this end, Keith Wheeler and John Byrne discuss the incorporation of sustainability education into K–12 standards. But this may be a Pyrrhic victory if students reach college only to find that sustainability education is largely considered an elective course, rather than imbued in all facets of university life. The United States lags behind many other countries in sustainability education and research, which is apparent in Wynn Calder and Richard Clugston's comprehensive overview of international efforts to connect institutions of higher education with sustainable development. Such efforts include some of the outcomes from the 2002 World Summit on Sustainable Development in Johannesburg, South Africa. This article helps us understand the challenges that lie ahead for the United States and how it can learn from its international compatriots.

Another step in creating a sustainable institution is to undertake a campus environmental assessment and, based on the results, shape policies and practices that mitigate or overcome deficiencies and impacts uncovered in the assessment. Ann Rappaport and Sarah Hammond Creighton describe the role of environmental assessment tools as part of more comprehensive environmental planning on campus, with a particular look at the Climate Initiative at Tufts University as a case study of how to devise policy and practice by treating the campus as a complex system in which all aspects of campus life are understood as opportunities to practice stewardship. Joshua Pearce and Christopher Uhl relate the creation of a campus sustainability policy at The Pennsylvania State University, based on the initiative of an ad hoc group of its own faculty scientists well-versed in the causes and effects of global climatic change. They describe a step-by-step process that facilitated the implementation of sustainability practices on campus. Julian Keniry describes the use of Environmental Management Systems (EMS) to guide the practice of sustainability on campuses. She notes that the success of EMS depends in part upon the cultivation of

### "Sustainability" Defined

As Nancy Tierney writes on page 13, for the purposes of this journal, sustainable activities are those that meet contemporary needs without compromising the ability of future generations to meet their needs. This definition derives from the Brundtland Commission (1987) report and has been accepted by many as the root meaning of sustainability. According to the *Oxford English Dictionary* (1993), the word "sustainability," as an adjective to describe that which is "capable of being maintained at a certain rate or level," seems to appear first in 1972. To put this in context, Aldo Leopold's *A Sand County Almanac*, a collection of essays on a land ethic and conservation, was first published in 1949; Rachel Carson's *Silent Spring*, a treatise on the unintended ills caused by the pesticide DDT and considered by many to be the catalyst for the environmental movement in many industrialized nations, was published in 1962; and the first Earth Day was celebrated in 1970. Over the last 30 years, as scientists, environmentalists, and policy makers more closely examined the world's ecological systems, the word "sustainability" has gathered force and turned into a movement. Reports from the field started coming back, raising our awareness of ecosystem degradation; air pollution; global climate change; depletion of freshwater stores; loss of biodiversity; major industrial accidents, such as Bhopal, resulting in thousands of deaths; and chronic industrial pollution, such as that found in Cancer Alley in Louisiana. It is doubtful that many of us would wish to turn the clock back to pre–Industrial Revolution times and suffer the miseries and uncomfortable conditions of those centuries. However, we can strive to improve and even radically alter the systems we've created over the last 200 years to acknowledge our burgeoning understanding of the role of contemporary human impacts on our planetary environment and our social relations with each other.

leaders who will champion campus environmental responsibility as well as the allocation of resources necessary for its implementation.

Keniry's observation brings us to another key element in creating a sustainable institution: leadership. Without supportive leadership, campus sustainability efforts have a hard time attracting the resources and compliance they need to succeed. Tom Wojciechowski discusses who can and should lead campus efforts toward greater sustainability as well as the importance of and opportunities for such environmental leadership based on his experiences at Northland College, an institution known for its environmental focus. Wojciechowski addresses one of the major challenges Northland faced: transitory leadership. He concludes that linking student learning to on-campus sustainability produced the majority of Northland's "greening" successes. In his Viewpoint piece, David Orr outlines Peter Senge's concept of the learning organization, an organization in which room is made for people to rethink organizational goals in response to a broader context. In this case, the context is ecological degradation and the challenge is to learn ways to "sustainably provision" our institutions. Orr then considers how the modern higher education institution might transform itself into a true learning organization, a key component of which is strong leadership.

Institutions have an important research role to play in educating the populace about sustainability. Faculty work—whether basic theoretical research, modeling and analysis, or applied research—serves to further our understanding of our planet and human interaction with it. Phillip Waite considers the implications of Walter Firey's landmark study of natural resource use for campus planners pursuing sustainability. Firey's model classifies practices of natural resource use in three ways: as ecologically possible, economically gainful, and culturally adoptable; only those practices that satisfy all three should be considered sustainable. Waite tests the application of this approach to a campus recycling program initiated at the University of Idaho. William Rees, one of the creators of ecological footprint analysis (EFA), provides an explanation of the EFA tool for assessing the ecological impact of specific populations. He discusses how EFA might be applied in a campus setting and some of the difficulties in doing so.

Anthony Bernheim cites ecological footprint analysis as evidence to remind us why we need to consider environmental sustainability when planning our campuses. He presents a workshop model for structuring a green campus design and development process, arguing that the workshop process is crucial to educating participants, who will then be better able to make informed decisions and arrive at a consensus about what "green" means. William Browning describes the advantages of green building in general and for educational institutions in particular. He debunks some of the myths that have kept green building from becoming more widespread (e.g., prohibitive costs) and points to three key steps for facilitating a successful green building planning and design process. Policies that support sustainable design can help campus planners in their efforts to obtain financing timed to green construction schedules as well as provide design guidelines. Authors Arnold Sowell, Amanda Eichel, Leon Alevantis, and Maureen Lovegreen review the effort in California to champion sustainable design and building practices through recommendations of the state's Sustainable Building Task Force, which culminated in an executive order from the governor. They outline the recommendations as applied to the University of California, California State University, and California Community Colleges systems. They discuss several building projects around the state as exemplary models but also point to some of the barriers to integrating sustainable building practices more systematically.

While "greening" buildings is critical to achieving any measure of sustainability on campus, efforts cannot stop with buildings. Campuses are often likened to cities, and with respect to the operational needs of a campus, that metaphor rings true. Traffic and transportation, land use and landscape design, storm water runoff, energy use, and facilities maintenance and operations all can be subjected to scrutiny from a green perspective and made more sustainable, more efficient, and more cost-effective in many cases, especially where government regulations (such as for air and water quality) may force expensive compliance when traditional management methods are used. Several authors delineate ways to approach campus planning and operations sustainably. Will Toor notes that transportation to and from campuses in fossil-fuel-burning automobiles constitutes one of the largest environmental impacts of most educational institutions and often affects town-gown relations. He details strategies for reducing the number of vehicle miles traveled by campus employees and students as part of an approach known as "transportation demand management," citing specific examples from U.S. colleges and universities. Carol Franklin, Teresa Durkin, and Sara Pevaroff Schuh survey recent efforts to revise traditional

views of the campus landscape to incorporate sustainability as part of campus development policies and practices as well as to expand the role of the campus landscape itself as a vital pedagogical tool. They describe the process of generating an Environmental Master Plan for a campus based on their work with the University of North Carolina at Chapel Hill. And Walter Simpson discusses a number of key organizational elements that have helped establish successful energy sustainability efforts on campus based on his work at the State University of New York at Buffalo. He pays particular attention to the crucial role played by facilities management and reminds us of the importance of documenting the work that is done in moving a campus toward energy sustainability, noting that results need to be tracked and celebrated.

William Moomaw concludes with an overview of the themes addressed in this special issue and at the same time argues for the need to realign institutional values with the goals of sustainability. He observes that, while we may point to many excellent sustainability projects and efforts at colleges and universities, few of them have adopted a comprehensive approach. Sustainability, then, is still marginal to how colleges and universities define themselves. And it is critical that we reposition sustainability as a centrifugal force, impelling our institutions of higher education to push continually farther in all directions to protect our future generations and their ability to meet their needs in healthy ways environmentally, aesthetically, socially, and economically.

We recognize that some aspects of sustainability are not covered in this issue, not because they are any less important, but due to constraints of space, time, and other resources. We hope that these constraints will spur further debate and contributions in the pages of *Planning for Higher Education* and at SCUP conferences, workshops, and other venues. You are encouraged to write letters to the editor or, better yet, articles for submission, and to propose conference sessions and workshops to fill in gaps in this issue.

One final note: The top headline of the November/December 2002 issue of *School Construction News* boldly declares: "Survey Finds Need for International College and University Construction." The article reported that existing institutions need to add space just to keep up with current enrollment figures. Further, with an expected increase of more college-age students, many nations will not only need to expand current facilities, but also will need to build new campuses. As I read this article, I found myself wondering if this special issue on sustainability and higher education could make a difference in the planning, construction, operations, and curricula of any of these needed renovations and new campuses. Are we here in time to make a difference? Is our voice strong enough to be heard, and heeded, in the various halls and offices where decisions are made? These are questions that have haunted planners in every age. I passionately hope that the answer in this case is yes, we are here in time and with convincing evidence and models to make a difference and to fulfill our mission as planners and designers to craft a better future.

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Whatever you can do, or dream you can, begin it.
Boldness has genius, power and magic in it.
Begin it now.
—J. Geothe

# Students' Guide to Collaboration on Campus

The Students' Guide to Collaboration provides recommendations for students who are interested in making positive change on their campuses. Here you will find reasons to collaborate, how to bring more people into the process, how to make change last, and what to avoid when working with others in the campus system. This guide serves to foster discussions with other students, and as a tool for sparking ongoing collaboration with faculty, administrators, staff, other students on campus, and the community.

Students are higher education's most crucial stakeholders—without them, these institutions would not exist. By virtue of sheer numbers and their capacity to organize, students can play a leadership role to bring all members of the university together to work on a shared agenda.; and collaboration by all sectors of the campus is key to real, transformative change.

## How can I create permanent, institutional change? What do you mean, collaboration? Who can I recruit?

Efforts for change will be most successful if people from different areas of the college community have a stake in them, and provide their voice and resources. Faculty, operations staff, administration, alumni/ae, trustees—everyone. Instead of trying to get the physical plant to change on your own, start a student group with that goal. Establish leadership roles that rotate yearly. Then use the student group to create a faculty, staff and student committee on your campaign issue. By working toward this goal you act to build bridges that connect the disparate cultures on campus.

## Bringing More People to the Table

Why it works. We encourage you to recruit people from all realms of your college or university life to work together for sustainability. We've found that the collaborative efforts

enacted by a consortium of faculty, operations staff, students, administrators and alumni/ae are the most effective, efficient, and long-lasting. When Second Nature holds workshops to facilitate change in colleges and universities, we ask that each school send a group of people from different areas of university life to attend as a team so that they may continue to work together and draw upon one another's resources after the workshop.

Universities and colleges are notorious for being departmentalized—academic disciplines, administrative departments, and campus physical operations tend to be disconnected parts of the campus. Even students are divided along departmental lines, as well as by graduate and undergraduate levels. However, progress toward sustainability requires that you look at the big picture, see the university as a system, and enact solutions that reach across all of these boundaries. For example, dining services needs to think about strategies for waste management, and faculty members must look at opportunities for education that engage and benefit the community at large.

When people come together from all the disciplines and departments of a university, they not only bring ideas and resources from their own areas; they also invent new strategies for change that defy compartmentalization. For example, an Environmental Advisory Committee composed of students, faculty, staff, alumni/ae, and community members will have much more to offer, and have more power to affect change, than any individual, or than a committee made up of students alone. Also, if others help to create the solutions and have a stake in the outcomes, they are much more likely to feel invested in its success.

How to do it. There probably are people in many different departments within your school who are already interested in sustainability issues. Faculty that teach related courses, administrators or staff people who have implemented environmental programs in the past, alumni/ae in certain job fields, and other students from all sorts of disciplines are probably already thinking about or acting to create sustainability initiatives on your campus. Taken together and organized, these efforts can be far more effective and lasting than they would be individually.

Working to establish connections among these constituencies has immediate advantages: information and resources can be shared;

the power of the group can leverage action from the institution; and official recognition can give sustainability issues a higher profile on campus.

- First, find out what is already happening in the area of sustainability on your campus. Duplication of pre-existing programs is a waste of valuable time and resources. Approach people in different areas of your university with ideas about forming a coalition. If you make your approach through a recognized student group, this adds credibility to your efforts.

- Get other students engaged! Residence Life staff are always looking for issues that unify students in a positive way. Frame sustainability as an "alternative" to destructive behaviors (like binge drinking). By working with Residential Advisors, hall directors, or the Director of Residence Life, you can often gain access to hall meetings that you might not otherwise know about.

- Use the system to your advantage. Work within established processes at your institution. Students have the power to affect change—even more so when they work within the parameters of institutional culture. Administrators will usually appreciate this and be more interested in supporting your efforts.

- Start with administrators that you already know. As with any change process, relying on interpersonal relationships and communication is critical. Specifically, which Student Affairs Administrators do you know and feel comfortable approaching: the Director of Residential Life, Director of Service Learning, Dean of Students, Athletic Coaches, others? Also think about administrators who might be your work-study supervisors. Engage them and get them excited first!

- Tap into faculty you know. You can reach administrators indirectly through faculty who often have influence on campus.

- Ask familiar faculty and administrators to tell you who are the "change agents" on your campus. Who are the movers and shakers? Engage others in approaching the movers and shakers with you.

- The Dean of Students is a good source for advice on reaching the diverse members of the campus community . For example, food service. Food service personnel are often frustrated by

vague student complaints, yet eager to serve students well, fix specific problems, cut costs and receive positive press! Offer specific alternatives to their activities (for example, replace Styrofoam cups or exchange salt and pepper packets for salt and pepper shakers.)

- Approach the Director/Coordinator of Service Learning (if you have one) or Internship Coordinator. Ask them about finding placements that link to sustainability issues. These folks are eager for ideas to get students' attention and please their interests.

- Use people's time wisely. Not many students will want to spend their valuable time collating and copying documents for the organization—especially if they are not involved in the "good stuff" to begin with. If a person has only a brief amount of time to work with you, make that time valuable for you and the member. After a few good experiences, the student may fit more time into their schedule for your organization. Faculty and administrators are often even more strapped for time. Be sure to use their time wisely, or be prepared to be shuffled down to the bottom of their list of priorities.

- Write an article or do an interview for publication in the student newspaper. Get creative - provide a top ten list of ways students can reduce their impact on campus. Solicit their ideas and conduct a contest to publish the best. Start a sustainability column.

- Print table tents on cafeteria tables. This is a relatively minor expense for a message that will receive high visibility.

- Improve your presentation skills. Everybody gets nervous before an important presentation, and the style and presentation of the message are important to catching administrators' attention. Before making a presentation to an important administrator, seek help from the theatre department or from a public speaking professor. Ask the faculty member for guidance, an hour of their time, to help you prepare to deliver your message most effectively.

- Study up on: innovation-diffusion theory, change agentry; campus models similar to your own that illustrate replicable processes/money savings strategies; and basic negotiation and communication skills.

# Making Change Permanent

Why it's necessary. Students have a limited number of years to influence their college or university. Too often, even the most successful student initiative is forgotten once the student leaders graduate. Therefore, it is critical to take your individual ideas and efforts and institutionalize them, so that they will endure once you have left. Creating a collaboration of people across campus is a great way to make this happen. Faculty, administrators, staff, and, most importantly, institutional policies or committees, tend to outlast a student's stay. And when change toward sustainability is institutionalized, the college itself becomes more sustainable, and will touch everyone at the university long into the future.

The permanence and recognition of a student group makes it easier to bring faculty, staff, alumni/ae and administrators on board, leading to the creation of a more permanent body of collaborators. This, in turn, can lead to institutional change, such as a University mission statement that includes sustainability, or an officially recognized committee that handles sustainability issues on campus.

How to do it. While this is not intended to be a comprehensive "how to" guide, the day-to-day operation of a student-initiated group has great bearing on its ability to succeed and to effectively collaborate with others on campus. Your organization must be perceived by everyone on campus as legitimate, serious and organized. Part of developing this image and the ability to reach to others outside of the student population has to do with how you recruit, maintain and sustain your membership. The following tips apply to all student groups who wish to manage their resources effectively for the long-term.

- Know your audience. Many efforts begun on campus are diluted before they can really start by not being directed in the right way. Make your message relevant to the student body with whom you are working, even though you may have to frame the issue differently than you do with yourself or your colleagues. Remember, people can approach the same problem from many different angles. Try to address these angles in your campaign, and as the years go by, re-evaluate them.

- Take advantage of the fact that you are able to act directly. Many young people in the 18-24 age group feel disconnected from the political process, even to the point that they do not vote. On the other hand, they are more likely to take matters

into their own hands. Take advantage of your nimble position and let other students know that through your organization they have the opportunity to act directly and to see the impact of their work, without much bureaucratic hindrance.

- Hold orientation sessions. Open meetings or orientation sessions allow people who are unsure about joining your group become familiar with your mission and goals. It also allows them to see how organized your group is (or is not!) and what types of students are involved. At these meetings be prepared to answer questions about the group and plan an activity to involve the people who come. Create a time for food and mingling afterward.

- Provide a clear understanding of the organization's or association's mission and goals. Communicating this most basic of information is of utmost importance from the very beginning. This way, expectations of your members will be neither too high, nor too low.

- Provide a clear definition of a volunteer's or member's role. The last thing you want is a volunteer or member who feels like they are not needed or valued. By defining a person's role, you are letting them know what you expect of them.

- Remember: Leadership is the domain of all people. Those in "official" leadership roles are not the only people qualified to lead. Characteristics of good leaders include self knowledge, authenticity, empathy, commitment and competence. For your group to be a leader on campus, it should exhibit a high level of collaboration, have a shared vision and a division of labor, treat disagreement with respect and continuously learn.

- Establish a Volunteer Coordinator. This position can be one of the most important for an organization that utilizes volunteers on a regular basis. The Volunteer Coordinator will be the point of contact for all incoming volunteers. This means he/she will need to present a good image of the organization, have a grasp of the organization's mission and goals, and have the ability to communicate through a variety of media as well as in-person. This person must also be extremely organized and must be responsible for scheduling volunteers on the calendar. The Volunteer Coordinator may want to set up a drop box in the student union that would allow students to express their interest in volunteering with the organization by writing down their contact information and

placing it in the box, to be collected later by the Coordinator.

- Be flexible with members' time. Create a monthly calendar for the group. The Ad Council recommends offering a variety of opportunities for participation—offer one day projects, once a week projects or "fit it in when you can" projects. Let volunteers and members participate over the internet. Include as volunteers those who just want to offer their opinions on your organization's process, either in special community meetings or on a listserv. One study showed that young adults care about the issues and want to get involved but, "They simply want to express themselves and get involved in their own way". Remember this as you make your plans for handling and developing members.

- Identify skilled people. It is important for an organization to have an inventory of the particular skills and talents of its members. This may be as simple as having each person fill out a survey, asking what their hobbies are, what they're majoring in, what they enjoy doing, and what they believe they are especially good at doing. People generally like being asked to take responsibility when it is in an area they particularly enjoy.

- Emphasize results. You may or may not have access to numbers that reveal your organization's impact. If you do, use these numbers to your advantage when trying to attract new volunteers. Recent studies have shown that one of the barriers to becoming engaged in a group working toward civil or social change is a lack of tangible evidence that you're making a difference. If you do not keep track of your impact, devise a way that you can and assign that job to someone who's interested (a statistics major, perhaps?). Develop an "ecological footprint" analysis of your group, or even of your college. Use these numbers to create a baseline for improvements in campus sustainability. A consistent record of improvement is one way to make your group invaluable to the campus.

- Emphasize rewards and thank your participants. Creating positive change on campus is not just beneficial to the campus community, it is an opportunity for you as well. Students often complain of stagnancy at colleges—taking a lot of notes, reading many, many books, but never actually participating in hands-on learning. Collaboration around campus sustainability is an excellent opportunity to engage your mind and to use what you've been learning. There are opportunities for

leadership and learning from others—possibly even training for future employment or an internship. Campus sustainability planning is real world experience, and can be reflected as such on that all-important resume. The connections that you make and skills that you learn during this time can propel you into a great future career. And don't forget about the positive internal rewards that you will receive after seeing something great achieved on your campus. In addition to the indirect rewards, **do not forget** to thank your members and volunteers. This can take many forms, whether it is a thank-you note after a project's completion, or a pizza party for the entire group. Using these methods, you will be able to retain participants and make the groups stand out on campus for years to come.

- Create social opportunities for the group. Group members will return if they perceive the group as a fun place to be. Be careful not to alienate those who may not be so "social", however.

- Use your student association or student government. Administrators pay attention to organized efforts. Student associations can rally around a positive cause like a sustainability initiative. Through your student association, you can create committees or clubs, take advantage of volunteers and find funding. Inquire about the association's budget cycle and submit a proposal that will lead to resource allocation when you need it (not six months later!) By relying on student organizations that perpetuate after you've graduated, you can help tackle the challenge of students' short time stint on campus. The Student Activities Director is often the advisor to Student Association. Whatever administrators serve this advisory role are terrific resources as well.

- Build intra- **and** inter-campus consortia. Inevitably, students on other campuses share similar concerns. If your group is small or new, it is helpful to pool resources and share the printing costs of posters, for example, with nearby (potentially more established) campus student groups. A group that is involved in such a network has a better chance of surviving.

## What to Avoid

- Don't drop the ball when someone approaches you with a desire to participate. Most volunteers will not return if they perceive an organization to be disorganized or not focused. Be ready with an informative pamphlet and a list of upcoming projects in which they can participate. This is where keeping a calendar and having a variety of participation options come in handy.

- Administrators do not care for in-your-face tactics. Avoid anonymous posters and letters generalizing what students believe. Threatening approaches alienate administrators, whereas approaches that demonstrate your interest in working with administrators are likely to build support.

- Avoid subversive actions. If you find an administrator challenging, don't go over his/her head to a supervisor or trustee to complain. You will risk alienating that administrator when you really want an ally. Instead, continue to work with that administrator or find an alternate administrator who is interested in what you propose. Particularly when sustainability is the focus, subversive tactics are inconsistent with the principles of harmony that you are advocating.

- Remember, administrators are concerned with: keeping the peace, keeping students happy, finding ways to engage students meaningfully in campus life, improving the learning environment, and managing campus finances for the long-term benefit of students and the institution.

## Collaboration in Action

Students for Socially Responsible Investing. Student members of the Barnard/Columbia University Earth Coalition were concerned with the investment policies of their school. They formed the club Students for Socially Responsible Investing (SSRI), and came up with a proposal that an advisory group be established to give concerned students, faculty and alumni/ae a voice in the investment decisions of the institution. Using the power of student numbers, they collected over 1,000 signatures in favor of this measure, and presented the petition to administrators. The result of their effort is the Advisory Committee on Socially Responsible Investing, established by the Board of Trustees. The Committee is composed of student, faculty and alumni/ae representatives appointed by the University president.

University of Colorado - Boulder—The Wind Power Referendum. In the spring of 2000, students at UC Boulder initiated a referendum to increase student fees and fund the purchase of wind power for 3 campus buildings that are paid for by student fees and are student-controlled: the student union, recreation center and campus medical center. By a 6 to 1 margin, the referendum passed, resulting in a $1 per student/per semester student fee increase that would generate $60,000 a year to purchase output from one turbine at the Excel Wind Farm. The University began purchasing the wind power in September 2000, and it now provides 35-40% of the energy used by those buildings.

Connecticut College—Joining a Clean Energy Co-op. With the support of the student body, the Connecticut College Renewable Energy Club worked with faculty, staff and administrators to earn support to join the Connecticut Energy Cooperative. Students raised $1,500 to join the Co-op through bake sales and conducted a petition drive that generated the support of nearly

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75 percent of the campus' 1,670 students. They agreed to pay a $25 fee that will enable the college to shift about 17 percent of its electric power use to electricity from renewable resources. By purchasing about 20 percent of the college's electricity through renewal resources would reduce the emission of sulfur oxide by 17,254 pounds per year, the emission of nitrogen oxide by 3,612 pounds per year, and the emission of carbon dioxide by 2.3 million pounds per year.

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Second Nature is a Boston-based national nonprofit organization working to help higher education prepare future professionals for the increasingly complex environmental and social challenges we face. We offer colleges and universities a range of programs, training sessions, one-on-one consulting and resources to make the integration of environmental sustainability thinking "second nature" to higher education.

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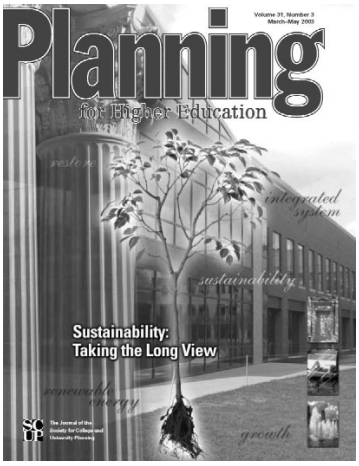


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