



Society for College and University Planning

# A (Recycled, Of Course) Six-Pack of Sustainability Lessons From the Past Year in Higher Education

A Report on Campus Sustainability Day III  
Held on October 26, 2005

By Terry Calhoun, Director, Media Relations and Publications, SCUP

Campus Sustainability Day IV will be held on October 25, 2006

Sponsored by



With the support of the Association for the Advancement of Sustainability in Higher Education (AASHE)



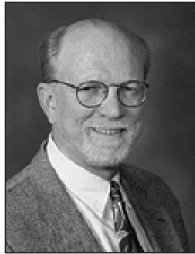
**Moderator**

Joe Palca, NPR science correspondent

**Panelists**



Anthony D. Cortese,  
Second Nature



Robert J. Koester,  
professor and chair of  
the university's Council  
on the Environment,  
Ball State University



Anthony Bernheim,  
principal, Green  
Design, for SMWM



Andrea Putman,  
Energy Consultant



E. Lander Medlin,  
executive vice  
president, APPA: The  
Association of Higher  
Education Facilities  
Officers

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**ABOUT SCUP**



Headquartered in Ann Arbor, MI, at the University of Michigan, the Society for College and University Planning serves a diverse member base of administrators, planners, and architects from public and private institutions, corporate partners, and higher education systems. The society is a community providing its members with the knowledge and resources to achieve institutional planning goals. Visit [www.scup.org](http://www.scup.org).

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# CAMPUS SUSTAINABILITY HEADING INTO 2006: A REPORT ON THE THIRD ANNUAL CAMPUS SUSTAINABILITY DAY

Sustainability is more than climate change, energy conservation, green buildings, locally grown food, and toxin or pollutant mitigation. For this report on the Campus Sustainability Day III webcast on October 26, 2005, we are using the definition provided by SCUP member and webcast presenter Anthony D. Cortese of Second Nature:

*Sustainability is about remaking the human presence in the natural world in a manner that will allow all current and future humans to be healthy; have strong, vibrant, secure and thriving communities and nations; have economic opportunity for all; and restore and maintain the integrity of our life-support system—the biosphere.*

The need for sustainable development and for humans to learn to live more thoughtfully and more equitably within our biosphere has never been clearer. Most people have realized that there are negative consequences for all humans, everywhere, now and in the future, from poor design, short-sighted development, and a lack of respect for or understanding of the interconnectedness of all things.

The good news is that higher education is doing a lot to help, and will be doing more. Postsecondary institutions are where the research is done for better understanding and technological fixes and the young people who are the consumers, engineers, teachers, and leaders of the future are being taught. Our campuses are also more recognized as a potent economic force, equivalent *in toto* to the economic power of the 26th richest nation in the world. So, we asked our correspondents from five major higher education conferences (see inside front cover), “How is higher education doing?” Their reporting can be summarized in the following four main areas.

“Sometimes you can see how there is erosion, and you can see how there is deforestation. It’s very widespread in some parts of the world. The atmosphere almost looks like an eggshell on an egg, it’s so very thin. We know that we don’t have much air, we need to protect what we have.”

Shuttle commander, **Eileen Collins**, speaking from Earth orbit, in early 2005, pre-Katrina & Rita

**1. Sustainability Models Cross-Boundary Integration:** Much of the progress in operations and learning is driven by (or is driving) the growth on campuses of a professional cadre of sustainability coordinators/directors, who join with academic centers, student advocacy groups, and high-level administrators to integrate sustainability programs in research, operations, policy, and learning.

**2. Sustainable Operations:** Great progress in sustainable operations on campuses is being made in areas ranging from green buildings through water use and reuse to energy conservation and the use of alternative energy sources. Many improvements are being shared with our institutions’ communities.

**3. Learning Sustainability:** Our correspondents described progress, although not as great, in bringing sustainability principles into the curriculum, including some progress in using sustainable campus operations as learning experiences for students.

**4. Sustainability, Policy, and Leadership:** Progress is also being made on the policy and leadership front, with more and more institutions and systems writing or implementing sustainability principles into policy and planning processes. Leadership in various institutions comes from a wide variety of groups and levels: student advocacy groups, facilities managers, business officers, faculty leaders, and top leadership.

Needless to say, sustainability makes headway quickest when driven by top leadership. However, there are other pathways to its integration across the campus, which will be the theme of Campus Sustainability Day IV on October 25, 2006.

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# 1. SUSTAINABILITY MODELS CROSS-BOUNDARY INTEGRATION.

Integration, collaboration, and multidisciplinary approaches to planning are core values of the Society for College and University Planning (SCUP), as seen in the organization's Strategic Plan from April 2005:

- Integrated planning in support of excellence in the academic enterprise.
- Innovative, collaborative, and multidisciplinary approaches to planning issues.

Sustainability in higher education, with its requirements of systems thinking, and of learning, as well as operational action across departmental and disciplinary boundaries, is an area that require comprehensive, integrated planning.

Collaboration across those boundaries is happening naturally at all levels. For example, at Ball State University, the Sustainability Council includes 95 members from all across the campus. The sustainability coordinators on many campuses are working with professors, purchasing, facilities, campus planners, student groups, and more. Unfortunately, these webs of connections may be nearly invisible to the higher levels of administration.

In *Universities and the Future of America*, former Harvard president **Derek Bok** opines "When society recognizes a need that can be satisfied through advanced education or research and when sufficient funds are available to pay the cost, American universities respond in exemplary fashion. . . . On the other hand, when social needs are not clearly recognized and backed by adequate financial support, higher education has often failed to respond as effectively as it might, even to some of the most important challenges facing America. . . . After a major social problem has been recognized, universities will usually continue to respond weakly unless outside support is available and the subjects involved command prestige in academic circles."

Yet, on some campuses the drive to collaborate and integrate comes from top leadership:

- At Arizona State University, for example President Michael Crow is personally invested in sweeping changes and advances regarding all aspects of sustainability and is behind multiple initiatives.

- Middlebury College has had a remarkable regional impact from taking its \$135,000,000 annual budget and using that as both lever and fulcrum to restructure how the campus accesses food, fuel, and fiber. Middlebury has reduced its waste stream by 62 percent. It sources 30 percent of its food supply locally. It has reduced its carbon load by eight percent. It composts something like 300 tons of material a year from its waste stream and manages a 250-acre forest, which is growing certifiably replenishable product.

- A new organization, the Association for the Advancement of Sustainability in Higher Education (AASHE), is providing a home for these integrated efforts. It is not just a professional association for college and university sustainability coordinators and directors; its membership includes everyone at an institution: administrators, staff, faculty, and students. AASHE's vision of integrated planning for sustainability is very much in the spirit of SCUP's core values.

## 2. SUSTAINABLE OPERATIONS

Sustainability in campus operations and design is where the greatest gains have been made in recent years. We're beginning to understand that it doesn't make sense to design a building that uses four times as much energy as it should use, or that has an internal environment that does less than it could to make the people who work and learn in it more productive and healthy. Led by the United States Green Building Council (USGBC), design enhancements for energy efficiency, reusing and recycling materials, and better air and light for inhabitants, are now widely accepted in higher education, written by state and system policy as mandates in several states.

Accomplishments in this area are great, despite the fact that "universities and colleges tend to have their operational budget separate from their capital budget and separate from their departmental budgets." (Putman) It's a good thing when campuses can "focus on the importance of considering a facility's lifecycle cost and that includes not just the planning, design and construction (or what we call the first costs), but also the operations and maintenance, and capital renewal costs through the life of the facility. So much of the time we forget that the lifecycle cost incorporates all these components. How these concerns are incorporated during design to reduce long-term maintenance costs and including them in the assessment when making sustainable building decisions at the campus becomes an essential part of the discussion." (Medlin)

When it comes to energy, many institutions collaborate for greater purchasing power:

- The EPA’s Green Power Partnership has approximately 500 partners, including 40 colleges and universities.
- The Pennsylvania Consortium for Interdisciplinary Environmental Policy is aggregating wind purchasing with approximately 40 colleges and universities in Pennsylvania.
- California State University and University of California Systems are aggregating and purchasing 15 percent green power for their whole system, which is a recent and tremendous commitment.
- The College of the Atlantic in Bar Harbor, Maine, received a million dollar endowment at the same time its administrators were making an historic commitment to purchase 100-percent wind for 20 years.

During the webcast we asked the audience how their campuses were doing with green power purchases or renewable energy. There is significant positive movement in this area (see figure 1).

Institutions also have made great strides in energy efficiency and are often investing in sustainability coordinator positions where experienced and knowledgeable staff can work across departmental boundaries to do even more.

Transportation on campus, including parking and mass transit, automobile diversion, and so forth, is an area where fewer strides have been made, although many large institutions, like the University of California System, are taking a hard look at ways to improve this critical area of sustainability.

Other areas, like purchasing, are also important. The National Association of Educational Buyers (NAEB) is at the forefront of these improvements. The National Association of College and University Food Services (NACUFS) also is working hard to provide healthy, organic, and locally grown foods for campus food services operations.

### 3. LEARNING SUSTAINABILITY

Integrating sustainability into what students learn may be the most complicated area reported on. “One of the major challenges we have is that sustainability is cross-disciplinary, and yet we’re organized by individual disciplines, just as physics is separate from economics is separate from biology. So the challenge we face is the disciplinary structure and the rewards and incentives within the university.” (Cortese)

“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, more cost-effective in many cases, especially where governmental regulation may force expensive compliance on top of more traditional operations.”

**David Orr**, Oberlin College

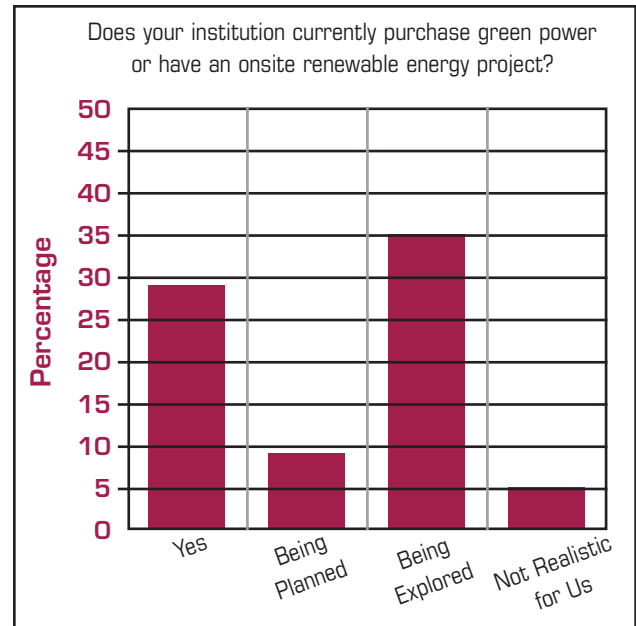


Figure 1

The most influential book of the last year in this area is *Sustainability on Campus: Stories and Strategies for Change*, edited by Geoffrey Chase of San Diego State University in California and Peggy F. Bartlett of Emory University in Atlanta. It includes 20 case studies of innovative programs and projects. At Northern Arizona University in Flagstaff, for example, the Ponderosa Project was a campus-wide effort that resulted in the revision of curricula in 120 courses as diverse as math, hotel management, music, and art history.

Perhaps the best example of using operations to model sustainability for learning is Ohio-based Oberlin College’s Adam Joseph Lewis Center, a green building with nearly 200 environmental sensors that students use to monitor the internal environment and a living waste reuse system that

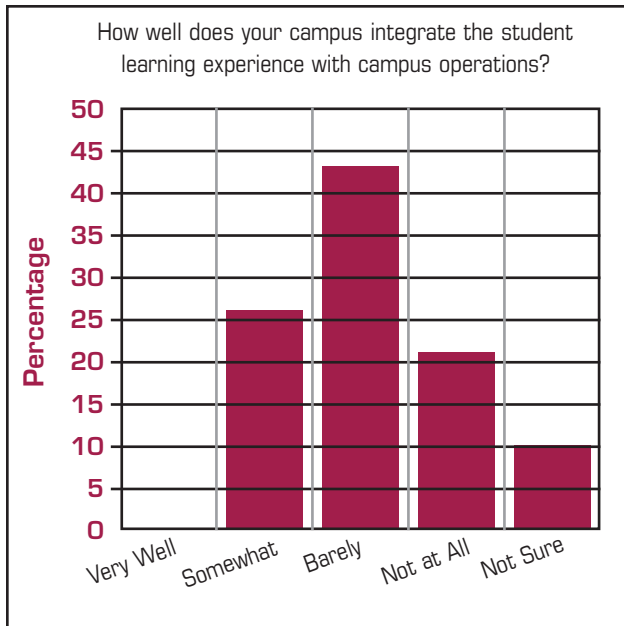


Figure 2

Administrators at Ithaca College in New York also use their campus and buildings to model sustainability, involving the faculty in green lunch discussions and sponsoring campus walks where talks are given about the landscaping, water recycling, and the buildings. They also bring conferences and symposia about sustainability to campus and encourage student participation.

There are very practical reasons for instilling sustainability into curriculum. Our universities are built environments, created from manufacturing and distribution processes that do not account for waste, use too much energy, and create unhealthy or even toxic circumstances for all facility users. This built environment has come to us from engineers, designers, and MBAs who received their credentials at our institutions.

As more and more companies create sustainable products, they are looking to staff their sales, product development, and manufacturing teams with graduates who understand sustainability principles. Leaders in a variety of industries are vying for graduates who “understand green.” Adding sustainability to curriculum produces graduates that manufacturers desire.

## 4. SUSTAINABILITY, POLICY, AND LEADERSHIP

What actions, programmatic activities, or statements can administration make to support and yield more environmentally responsible behavior? It’s helpful to look at the question both from an explicit and implicit point of view. “At our university, for example, we have a Statement on Sustainability that sits on our website and is kind of an umbrella under which all things happen. That itself is not a policy, but it guides policies that are developed. We have adopted policies regarding LEED on building construction and waste management and energy conservation.” (Koester) So policies may, in fact, serve the larger idea of sustainability. If an institution does not have a singular statement, planners and others can advance sustainability with minimal effort by bringing coherence to scattered policies and statements.

When we asked webcast attendees about their own campus policies, the results indicated that such policies are

can be viewed at several points in its cycle.

Such large programs are not necessary, however, as many institutions have had success with remarkably small budget dollars granted to junior faculty who are willing to spend a portion of their summer months reworking their curriculum to include more sustainability principles.

Few institutions, however, make it clear to students that they are modeling sustainability in campus operations. Cortese reported that, in recent visits to six campuses that had new, LEED-certified green buildings, two of which were freshman residence halls, there was no way in five of the buildings for students to even know that they were living or studying in a model building. Also, there were no organized systems to explain what was green about the buildings and how they were different from traditional buildings. So, we’re currently missing an educational opportunity by not highlighting our sustainable actions to our students.

The truth of his anecdotal experience was revealed when we asked webcast attendees about the learning use of such facilities on their campuses (see figure 2).

“When setting out to plan a new building, colleges and universities do not set out to add large amounts of carbon dioxide to the global atmosphere. The campus master plan that envisions stately new buildings and convenient new parking areas seldom considers the contribution of these impervious surfaces to the flooding of neighbors’ homes downstream. Cafeteria managers do not develop diverse new menus with the intent to contribute to soil erosion or rainforest destruction. Unfortunately, too often, these are the possible consequences of everyday plans.”

Tom Wojciechowski, adjunct instructor in leadership and sustainability for Northland College

being developed and planned for in the majority of institutions (see figure 3).

At Ball State University in Indiana, Robert Koester explained that “Champions are absolutely critical to the success of any of these ventures. And it can happen at any level of the institution. Certainly the president can provide tremendous direction and inspiration but the provost as a chief academic officer or the vice president who’s overseeing the facilities plant can equally direct and inspire. In our own experience, we’ve found that we’ve been able to cultivate champions at several levels throughout the institution, and what’s nice about that is that you can actually get them in dialogue with one another. It is possible to build a network for exchange of ideas along the chain of command, and it’s absolutely critical to success.”

From the smallest level, one correspondent noted that, “If you have a successful project, everybody wants to be part of it. So one way is to develop your own little island and show that it’s successful. The other way to do it is to bring people in from all campus levels—from administration to faculty—and get everyone involved in the discussion. That’s how the message will spread quickly.” (Bernheim)

Student groups have done remarkable things in recent years. They're not just demanding change, they're making it happen—sometimes even taxing themselves with additional fees to make things like use of locally grown foods and purchase of alternative energy happen. No organization has done more with student groups than the National Wildlife Federation’s Campus Ecology Project. In addition, the student-led, newly founded Campus Climate Challenge group is a major initiative on 150 campuses with a goal of reaching 500 campuses.

Presidential and top leadership organizations are getting more involved. The Association of Governing Boards of Colleges and Universities (AGB) has often has sustainability as a top issue for its constituency, and a forthcoming issue of the American Council on Education’s (ACE) *Presidency* magazine has a feature article with four sidebars written by presidents describing how they are supporting the integration of sustainability within their institutions.

Leadership from the top also is needed to lobby for a proposed amendment to the Higher Education Act, called the Higher Education Sustainability Act. It would provide grants for sustainability programs on campuses (\$50 million per year) for the next decade. That might be the economic tipping point that would let higher education make meaningful progress in spreading the lessons of sustainability.

## GOING FORWARD

Higher education is not alone in experiencing a significant impetus toward sustainability. Communities and neighborhoods, even entire states, are undergoing the transformation to a new perspective.

If you have a desire and the opportunity to get involved in sustainability initiatives, work to make a difference on your campus. Connect some people. Fund a student initiative. And be sure to tune in on October 25, 2006, for Campus Sustainability Day IV. SCUP’s webcast for that day is titled: “A Close Look at Successful Models for Integrating Sustainability Throughout a College or University.”

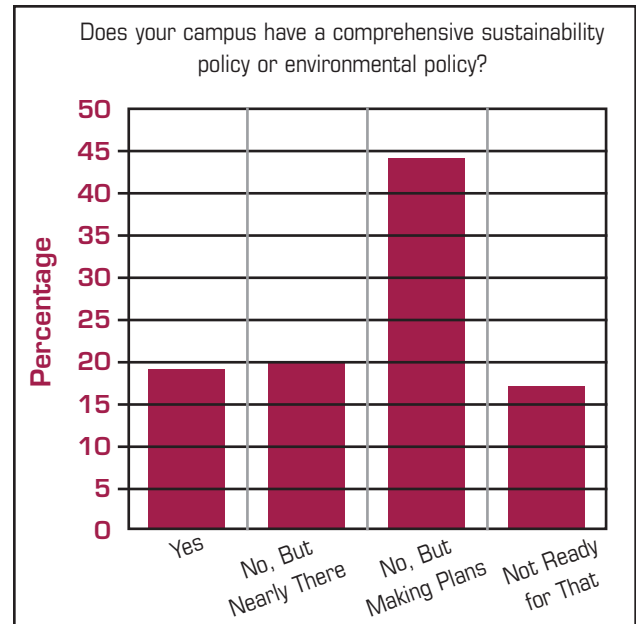


Figure 3

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# SUSTAINABILITY RESOURCES

## **The Campus of the Future: A Meeting of the Minds**

An historic event in higher education is happening in Hawai'i in 2006: The first-of-its-kind joint conference of three leading associations that serve higher education: The Association of Higher Education Facilities Officers (APPA), the National Association of College and University Business Officers (NACUBO), and the Society for College and University Planning (SCUP). One of the conference's major tracks is sustainability and the conference logistical staff are working hard to 'green' the conference. Be sure that a team from your campus attends!

## **Online Sustainability Knowledge Community**

Several hundred higher education leaders who want to stay connected and share knowledge about sustainability are subscribers to SCUP's online Sustainability Knowledge Community. Anyone may join by sending a message to "scup-sustainability-request@umich.edu" with the word "subscribe" in the subject line of the message. Please do.

## **Special Issue of *Planning for Higher Education Journal***

In 2003, a special issue of SCUP's peer-reviewed quarterly journal, *Planning for Higher Education*, was published. "Sustainability: Taking the Long View" is still available from SCUP's online bookstore and remains a key reference for every higher education leader's bookshelf. Written by leading experts in the field, the chapters examine why colleges and universities should consider sustainability, discusses how to create and implement sustainability policies and practices on campuses for a wide range of institutional functions (e.g. curriculum, facilities, leadership, management systems) and provides resources to guide planning practitioners.

## **CDs of Previous No-Travel Sustainability-Related Learning Events**

SCUP has several other webcasts (and one audiocast) on CD available for purchase in our online store. They include: "A (Recycled, Of Course) Six-Pack of Sustainability Lessons From the Past Year in Higher Education" from October 26, 2005, "2004 Report to the Academy: The State of Sustainability on Campus" (audio), "Sustainability Dollars and Sense—Understanding the Financial Costs and the Benefits of Green Buildings," "Sustainability in the Curriculum: Theory to Practice," and "Sustainable Building and Design on Campus—Building a Restorative Educational Environment."

## **Campus Sustainability Day IV**

Campus Sustainability Day was conceived in 2003 with the mission to bring together faculty, administrators, students, staff, and even community members on campus—across departmental and discipline boundaries—to celebrate achievements and to reinforce the need for moving toward sustainability with integrated, comprehensive planning. To date, several hundred campuses have participated in Campus Sustainability Day events in October of 2003, 2004, and 2005.

Campus Sustainability Day IV will be held on Wednesday, October 25, 2006. Visit [www.scup.org/csd/4/](http://www.scup.org/csd/4/).

## **Higher Education Climate Action Partnership (HECAP)**

HECAP is designed to assist higher education institutions across the United States in reducing climate disruptions by limiting greenhouse gas emissions and thereby promoting a sustainable future.

This website provides stories of accomplishments at colleges and universities as well as tools, processes, and resources that colleges and universities can use. The site is sponsored by the College Student Educators International (ACPA), the Association of College Unions International (ACUI), the Association of Higher Education Facilities Officers (APPA), the National Association of Educational Buyers (NAEB), and the Society for College and University Planning (SCUP). Visit [www.hecap.org](http://www.hecap.org).

## **The Association for the Advancement of Sustainability in Higher Education (AASHE)**

AASHE is a membership-based association of colleges and universities working to advance sustainability in higher education in the US and Canada. It works in partnership with businesses, NGO's, and government agencies that support our mission.

On its website, you'll find many resources to assist your campus sustainability efforts, including a sustainability policy bank, a campus sustainability professionals page, interest groups, publications, classroom resources, and useful links for virtually every aspect of campus operations. Of special interest is the 2005 AASHE Digest: An Annual Review of Campus Sustainability. Go to [www.aashe.org](http://www.aashe.org).