

Higher Education: More and More Laboratories for Inventing a Sustainable Future

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Sustainability is a growing imperative in higher education in America. Practitioners define sustainability both narrowly as the long-term protection and health of the natural environment, and broadly as the triple bottom line of environmental health, economic viability, and social well-being. A university fully committed to sustainability emphasizes an interdisciplinary and holistic approach to fostering the knowledge, skills, and attitudes needed to build a more sustainable world for present and future generations. Colleges and universities across the United States are increasingly practicing sustainability in campus operations, with climate change serving as a catalyst for energy conservation projects, renewable energy purchasing, recycling, and sustainable food initiatives. Departments of environmental studies and science remain strong or are increasing in popularity as general awareness of our environmental predicament grows. Specific courses and programs focused on sustainability are also increasingly evident, while sustainability as an academic discipline in its own right is at an early stage of development.

Fostering a more sustainable world is arguably the most logical outcome of the higher education endeavor. Nearly every college and university mission statement holds the institution to a purpose higher than simply the creation and dissemination of knowledge. Higher education consistently aspires to instill in graduates such qualities as good citizenship, moral integrity, leadership, critical thinking, and care for the environment. The work of building a sustainable world requires precisely these qualities and more. Because colleges and universities are uniquely equipped to help achieve sustainability through innovation in teaching, research, and institutional practice, it would seem incumbent upon them to rise to this challenge.

When deeply embraced by a college or university, sustainability is reflected in each of its core areas: curriculum; research; operations;

community outreach and service; student life; and institutional mission, policy, and planning. When embraced by higher education's external stakeholders, sustainability is supported by disciplinary and professional associations, governments, private foundations, non-governmental organizations, and the business sector. This chapter assesses the state of progress in sustainability in higher education (SHE) and shows that increasing numbers of college and university campuses are becoming laboratories for inventing a sustainable future.

Curriculum

Despite the continuing trend toward specialization within traditional academic disciplines at U.S. colleges and universities, an increasing number of courses are being developed that incorporate sustainability concepts. There are also efforts underway to transform academic programs and create centers that foster interdisciplinary thinking, a hallmark of education for sustainability.¹ Programs in sustainability studies and related programs in sustainable design, sustainable agriculture, sustainability education, and sustainable business are emerging at several schools around the country. For instance, Arizona State University's new School of Sustainability began offering B.A., M.A., and Ph.D. programs in September 2007; Prescott College and Antioch New England began offering graduate degrees in education with a sustainability focus in 2005 and 2006, respectively.

Professional schools are also responding to the sustainability challenge. Some of the most promising are trends in law and business schools. Vermont Law School has an Environmental Tax Policy Institute, which, among other things, sponsors annual global symposia on environmental taxation.² The University of Washington School of Law offers a graduate program in the law of sustainable international development.³ More law schools are offering seminars, courses, and symposia on sustainable development. To some degree, this is an outgrowth of international environmental law, which tends to use sustainable development as a conceptual framework, particularly when dealing with topics like biodiversity and climate change. More and more law schools, in fact, are offering courses on these specific topics, often in a sustainability context.

Beyond Grey Pinstripes, a biennial survey and ranking of business schools, highlights innovative full-time MBA programs that are integrating social and environmental stewardship into curricula and re-

search. Of the more than 600 full-time MBA programs across six continents invited to participate in the survey, an increasing number (63 percent in 2007, up from 54 percent in 2005 and 34 percent in 2001) require one or more courses in ethics, corporate social responsibility, sustainability, or business and society.⁴

Despite clear progress in recent years, however, most college and university students still receive little or no exposure to sustainability within their academic coursework, and there are few rewards for faculty who integrate sustainability themes into their teaching. While evidence indicates a growing interest in sustainability, particularly the incorporation of environmental issues into standard academic subjects, there is much work still to be done to ensure that all students graduate with a basic understanding of sustainability concepts and an ability to implement them through critical thinking and problem solving.

Research

Sustainability-oriented research is increasingly funded in the sciences, but initiatives are also underway to include the social sciences and humanities. “Sustainability science” is emerging as a legitimate area of research, and the *Proceedings of the National Academies of Sciences* has even devoted a new section of the journal to the field.⁵

Likewise, the academic community has seen a growth in peer-reviewed journals and other publications focused on sustainability: the *International Journal of Sustainability in Higher Education* (Emerald) was launched in 2000; *Environment and Sustainable Development* (Inderscience) in 2002; and both the *Journal of Education for Sustainable Development* (Sage Publications) and *Sustainability: The Journal of Record* (Mary Ann Liebert, Inc.) in 2007. Business and law journals now discuss sustainable development or include sustainability themes. American University’s Washington College of Law publishes a student-run journal called *Sustainable Development Law and Policy*.⁶

Along with the increasing number of publishing outlets for academic research on sustainability, many new research institutes focused on sustainability and related topics have been founded in recent years. The Georgia Institute of Technology, a leader in this area, hosts the Institute for Sustainable Technology and Development, a campus-wide advocate for sustainability in curriculum, research, and opera-

tions. Research at the Institute has focused on a range of issues: fuel cells, organic photonics and electronics, biologically inspired design, air pollution, and urban sprawl in U.S. cities.⁷

Higher education research will always tend to go where the money is. While few private foundations or government offices are funding SHE in classroom teaching or promoting sustainable operations of college facilities, they are showing increased interest in environmentally relevant research, especially as it relates to global warming and renewable energy technology.

Operations

“Campus greening,” or sustainable campus operations, is the poster child of the SHE movement. New projects and programs are reported daily on e-mail discussion lists and e-bulletins devoted to this topic. Sustainable operations include recycling and waste minimization, energy and water conservation, green purchasing, transportation initiatives, sustainable landscaping, green buildings, and more. Such practices and technologies bring tangible, environmentally responsible results, and they can save money over time.

The 2008 *College Sustainability Report Card*, a study published by the Sustainable Endowments Institute, attests to steady growth in sustainable operations. The study evaluates the 200 colleges and universities with the largest endowments in the United States and Canada in eight categories,⁸ including climate change and energy, food and recycling, green building, and transportation. Building on the 2007 report of the 100 richest institutions, the findings showed the strongest gains in sustainable food systems and recycling. For example, 70 percent of the schools evaluated commit a portion of their food budgets to purchasing from local farms and/or producers. To address climate change, nearly half of the schools have committed to carbon reduction, and almost one in three have committed to “climate neutrality” (having no net greenhouse gas emissions) in the long term. Over 60 percent of schools reported working on green building projects, though most lacked green building policies. Equally impressive were improvements in transportation programs, with hybrid or electric vehicles used in fleets at 42 percent of schools and biodiesel made or used at 31 percent of schools.⁹ As a barometer of SHE initiatives in the rest of U.S. higher education, these results indicate significant gains over the past several years.

Climate change has indeed become the catalyst for many campus greening initiatives, especially in energy conservation and sustainable design. Tufts University was one of the first to use climate change as an organizing concept. The Tufts Climate Initiative, launched in 1999, supports a series of campus energy-reduction activities and programs designed to help the university meet its goal of cutting its emissions 7 percent below 1990 levels by 2012.¹⁰ Yale University committed in 2005 to a reduction in greenhouse gas emissions to 10 percent below 1990 levels by 2020.¹¹ By spring 2008, over 500 U.S. college and university presidents had signed the American College & University Presidents Climate Commitment (described in more detail below).¹²

Sustainable design on campuses is one of the most promising new trends in the SHE movement. New buildings and existing building renovations are increasingly built to LEED (Leadership in Energy and Environmental Design) standards, a certification system administered by the U.S. Green Building Council.¹³ Over 40 institutions have adopted green building policies requiring new construction to meet sustainability specifications, and public universities are increasingly subject to state regulations mandating green building techniques in publicly funded buildings.¹⁴ Among professional schools, LEED certification is also catching on. In 2003, the University of Denver became the first law school in the country to achieve LEED gold status,¹⁵ and the new law building at the University of Colorado at Boulder recently earned a gold rating.¹⁶

Green purchasing has also become increasingly popular, with some schools acting alone and others forming consortia to increase their purchasing power. A 2006 survey of professionals involved in purchasing decisions at 470 colleges and universities found that nine out of 10 campuses take sustainability into account in deciding upon new products, including consumables, furnishings, and building materials, and that three-quarters are switching to environmentally friendly janitorial products and equipment.¹⁷

While efforts to incorporate sustainability into campus operations are accelerating and recent advances are encouraging, most campuses are still a long way from operational sustainability. Most of the attention to date has focused on sustainability measures that save money, and yet only a small number of institutions have created mechanisms to ensure that these savings are used to help finance sustainability measures with lower rates of return. It remains to be seen how cam-

pus will respond once the most cost-effective sustainability measures have been implemented.

Community Outreach and Service

Numerous universities and colleges promote sustainable development in their surrounding communities and beyond. These efforts typically involve service learning projects, student internships, and student and faculty research. Now considered mainstream in higher education, service learning is also an effective pedagogical strategy for integrating sustainability into class work.

Allegheny College, a small liberal arts institution in rural northwestern Pennsylvania, is working to improve the economic and social dimensions of a struggling region through environmentally oriented projects. The college created the Center for Economic and Environmental Development (CEED) in 1997. Wanting to be part of the solution to local and regional economic challenges, faculty members from several departments founded CEED “to work with the community toward a forward-thinking vision for the region that is both economically inspiring and environmentally sustainable.”¹⁸ CEED focuses on areas such as watershed protection, educational outreach, sustainable energy, art and the environment, agriculture and forestry, and environmental justice. Each year, nearly 150 Allegheny students (out of approximately 1,900) work with over 100 community partners, such as schools, landowners, and logging companies, on sustainable development in the region. Allegheny faculty and students engage with local and regional community stakeholders in ways that will have lasting practical as well as educational results. They are proving that the health of both the institution and the surrounding community are ultimately interconnected.

Student Life

Student environmental activism has risen dramatically since 2002, and students are often the major drivers of sustainability on their campuses. The Energy Action Coalition, which unites more than 40 student organizations from across the United States and Canada, launched the Campus Climate Challenge campaign in 2005. This youth-led campaign has catalyzed climate and energy initiatives on many campuses, trained thousands of students, and held hundreds of events focused on clean energy on campus. In November 2007, the

Coalition brought together more than 5,500 young people from all 50 states for Power Shift 2007,¹⁹ the first national youth summit devoted to solving the climate crisis.

Student sustainability leaders have found that increasing student fees can be an effective way to fund campus sustainability initiatives. This strategy, which was started in 2000 by students at the University of Colorado at Boulder, has now been utilized successfully on over 50 campuses across the United States.²⁰ These fees range in size from \$1 to \$45 per student per semester but almost always receive wide approval in student elections. Generating as much as \$350,000 annually at the largest institutions, the fees are used in various ways, including purchasing renewable energy, hiring sustainability staff, and supporting campus recycling programs.

Also increasingly popular at schools across the country are sustainable living programs, in which students engage in peer-to-peer education to encourage behaviors such as energy and water conservation, recycling, and waste reduction in dormitories. Harvard University's Green Campus Initiative has had success with this model, supporting a formal program in undergraduate dormitories.²¹ Harvard's professional schools are also joining the effort; for example, the Harvard Law Green Living Program began its third year of operation in the fall semester of 2007.²²

As with energy and climate issues, student interest in sustainable food and recycling initiatives continues to grow. Student demand for local, organic, and fair trade food options has led more than 200 campuses to initiate farm-to-college programs, which match up local farmers with area universities. Participation in RecycleMania—a friendly competition among campuses to increase recycling and reduce waste—has more than doubled annually, growing from two participants in 2001 to 400 in 2008.²³

Though widespread, student support for sustainable campuses is still far from universal, and the fact remains that many students receive little extracurricular exposure to sustainability issues. As is often the case, however, it is student demand that will ultimately bring even greater commitment to sustainability within higher education.

Institutional Mission, Policy, and Planning

Various indicators show a strong shift toward sustainability at the administrative level of U.S. colleges and universities. The 2008 *Col-*

lege Sustainability Report Card examined four categories related to leadership and financial commitment, including administration, endowment transparency, investment priorities, and shareholder engagement. According to the study, more than one in three of the 200 schools evaluated have full-time staff dedicated to sustainability, focused primarily on campus operations and student engagement. Evidence suggests that many more colleges and universities have hired or are considering hiring sustainability coordinators and directors.²⁴ More than one in five schools reported having an office of sustainability, and more than 60 percent have a sustainability advisory committee. On questions concerning endowment, about 20 percent of respondents said they invest a portion of their endowment in renewable energy funds, but only about 6 percent invest in community development funds. Schools were weakest in the areas of shareholder engagement and endowment transparency.

Among the most promising campaigns by higher education leaders to advance sustainability is the American College & University Presidents Climate Commitment (ACUPCC). Initiated by a group of college and university presidents in 2006, the ACUPCC commits institutions to neutralizing their greenhouse gas emissions, and to accelerating research and educational efforts to equip society to restabilize the earth's climate.²⁵ As of June 2008, over 555 presidents and chancellors had signed the ACUPCC, which is expected to be a major driver of sustainability in higher education in the coming years.

Despite the success of the ACUPCC, too few leaders in higher education are willing to challenge the status quo. Colleges and universities tend to be reactive institutions. Climate change, increasingly seen as the fundamental environmental, economic, and indeed social challenge of our time, may one day prove to be the catalyst for a commitment to sustainability by a majority of higher education leaders.

External Forces Supporting Sustainability in Higher Education

Grassroots efforts and nonprofit organizations have consistently worked to strengthen sustainability in higher education in the United States. Several deserve mention here²⁶:

- The Association for the Advancement of Sustainability in Higher Education (AASHE) is a membership-based association of colleges and universities in the United States and Canada committed to education for sustainability.²⁷

Founded in 2005, AASHE has grown to become the largest organization of its kind, serving primarily as a clearinghouse for information about campus sustainability and offering a variety of professional development opportunities.²⁸

- The Campus Consortium for Environmental Excellence, founded in 1997, maintains a network of environmental management professionals, develops resources and tools, and promotes innovative regulatory models.²⁹
- The National Wildlife Federation's Campus Ecology Program, founded in 1989, supports climate leadership and student-led campus greening initiatives.³⁰
- Second Nature, founded in 1993, promoted SHE in the 1990s through advocacy, faculty development workshops, and online resources, and now primarily helps initiate regional and national networks for SHE.³¹
- University Leaders for a Sustainable Future, founded in 1992, serves as the secretariat for signatories of the Talloires Declaration, which commits colleges and universities to advancing sustainability in teaching and practice.³²
- The U.S. Partnership for Education for Sustainable Development was formed in 2004 to engage representatives from all levels of education and all sectors—business, government, and civil society—in support of the United Nations Decade of Education for Sustainable Development (2005-2014).³³

State and regional networks supporting SHE are well established in the United States, including the New Jersey Higher Education Partnership for Sustainability (NJHEPS), founded in 1999,³⁴ and the Pennsylvania Environmental Resource Consortium, founded in 2000.³⁵ In recent years, similar networks have arisen in states such as California, Maine, Michigan, New York, and South Carolina, and in regions like the Upper Midwest and the Northeast. One of the most prominent regional groups is the Northeast Campus Sustainability Consortium (NECSC), which was established in 2004 to support the growing network of campus sustainability staff from institutions in northeastern United States and maritime Canada.³⁶

In 2005, 14 mainstream national higher education associations formed the Higher Education Associations for Sustainability Consortium (HEASC), which works to advance sustainability among mem-

ber constituencies, including facilities directors, business officers, campus planners, and student services officers.³⁷ Similarly, over twenty national disciplinary associations (including the American Society of Civil Engineers and the National Association of Biology Teachers) formed the Disciplinary Associations Network for Sustainability (DANS) in 2006 to promote education for sustainability via legislative briefings, public outreach, curricula, professional development, and accreditation standards.³⁸

Historically, SHE has received little federal government support in the United States, except for modest interest from the Environmental Protection Agency, which houses an Office of Environmental Education and provides information on making campuses more eco-efficient. There are indications, however, that this may be changing. The Energy Independence and Security Act of 2007, which was signed into law in late 2007, included language authorizing \$250 million annually in grants and another \$500 million in direct loans for renewable energy and energy efficiency projects at higher education institutions, public schools, or local governments. Additionally, the Higher Education Sustainability Act of 2007 was introduced in both the House and Senate in fall 2007. The bill would amend the Higher Education Act to authorize a new \$50 million grant program at the Department of Education to support sustainability projects at higher education institutions and consortia/associations. Though passage of this bill is uncertain, its introduction is a hopeful sign.

While there is evidence of a growing demand in the business sector for sustainability-literate graduates,³⁹ most of the external support for SHE in America continues to come from grassroots efforts and non-profit organizations. To date, little external funding exists—either from private or corporate foundations or from government coffers—to help push higher education toward greater commitment to sustainability.

Recommendations

To enhance and build upon the successes of the past several years, a critical mass of internal and external stakeholders must mobilize in order to create the model sustainable institution of higher education envisioned here. To achieve this goal, we recommend the following actions within each of the core areas of university life, as well as among external stakeholders:

1. Curriculum: *To ensure that all students achieve basic sustainability literacy, institutions need to create graduation requirements or core courses focused on sustainability.* This requirement could take the form of a single required class or a menu of sustainability-focused courses from which students could choose.⁴⁰ To help faculty infuse sustainability into their teaching, institutions should offer sustainability course development workshops based on the successful peer-to-peer approaches pioneered in the Ponderosa and Piedmont projects.⁴¹

2. Research: *To help meet the vast research needs for advancing sustainability and to capitalize on increasing demand for sustainability-related research, institutions should increase support for existing research centers and institutions related to sustainability, and should consider establishing new ones.* Institutions should also restructure their academic reward systems to provide incentives for interdisciplinary research and teaching on sustainability topics. By providing students with research opportunities in sustainability-related subjects, institutions can prepare students for careers in emerging fields such as sustainable business, design, engineering, and agriculture.

3. Operations: *Institutions should expand efforts to become more sustainable in their operations.* To help finance sustainability projects on campus, institutions should investigate the creation of mechanisms to reinvest the savings from these projects into additional sustainability initiatives. Institutions should also work to connect campus sustainability activities with their educational and research efforts. The physical campus can be a powerful learning tool when students are given the opportunity to work with facilities staff and conduct studies on campus sustainability features such as green roofs and renewable energy technologies. Lastly, colleges and universities should hire full- or part-time sustainability directors to inspire and help coordinate these multi-constituency efforts.

4. Outreach and Service: *Institutions should partner with their local communities and regions to promote sustainable development.* Such partnerships break down the barriers between town and gown, support practical and experiential learning and research, and foster long-term sustainable community development.

5. Student Life: *Sustainability can be made an integral part of campus culture through various new programs.* Institutions can cre-

ate peer-to-peer student sustainable living programs; incorporate sustainability into new student orientation and training for resident assistants; organize inter-dorm sustainability competitions; and endorse efforts, such as the Campus Climate Challenge, that foster active citizenship and leadership among students. For their part, students should work to conserve energy and water, reduce waste in their daily lives, and participate in sustainability outreach campaigns. Students should also support their institutions' sustainability efforts by approving increases in student fees for sustainability purposes. Finally, students should hold administrators accountable for meeting the sustainability commitments that their schools have made.

6. Institutional Mission, Policy, and Planning: Sustainability initiatives need upper-level support to flourish. Signing presidential commitments like the American College & University Presidents Climate Commitment is an important way to signal this support since it integrates sustainability with strategic planning. However, to be truly effective, these commitments need to be backed up with real action. Higher education leaders should work to make good on their sustainability pledges, defend them publicly, and ensure that sufficient funding has been allocated to enable implementation.

7. External Stakeholders:

(a) Nonprofit organizations should continue to support sustainability in higher education by providing resources on best practices, facilitating information sharing between campuses, and improving the ability of schools to assess their progress. These organizations should also provide training and professional development opportunities to help strengthen the SHE community. National higher education associations should increase efforts to educate their members by incorporating sustainability into their programs, publications, and events. There is a continuing need for mechanisms like the Presidents Climate Commitment that encourage higher education leaders to express their commitment to sustainability, as well as programs, such as RecycleMania, that foster friendly competition among campuses.

(b) Business has a critical role to play in supporting sustainability in higher education. Businesses that serve higher education should increase their sustainable product offerings, and work to support their clients' sustainability efforts. Businesses of all kinds can also partner with universities and provide funding for sustainability research.

Lastly, businesses that have an interest in hiring employees with knowledge of sustainability principles and practices should, in partnership with the nonprofit community, issue a joint declaration highlighting their desire for sustainability-literate employees and expressing support for sustainability in higher education.

(c) Government should work to create the regulatory conditions that will promote the growth of sustainability in higher education.

For instance, regulation of carbon dioxide emissions and subsidies for renewable energy and other sustainable technologies provide incentives for higher education (and society at large) to move toward more sustainable energy sources. Likewise, state regulations requiring the achievement of ambitious efficiency standards for all publicly funded buildings (including those at public colleges and universities) provide further impetus for sustainability on campus. Voluntary programs that provide technical support and incentives for sustainability, such as the U.S. Environmental Protection Agency's Green Power Partnership, also have an important role to play. Finally, to enable American leadership in emerging sustainable industries, which include growth industries such as renewable energy, government should expand funding for sustainability research.

Conclusion

There has been significant progress in sustainability in higher education in the United States since 2002, particularly in campus operations. While only a few disciplines give legitimacy to teaching and research in this area, there is strong evidence that many are beginning to recognize sustainability as an important societal priority for the 21st century. Though little funding from either governments or foundations supports higher education initiatives in sustainability, a dynamic network of grassroots and nonprofit efforts is advocating effectively for this transition within U.S. colleges and universities.

American higher education can be very innovative and adaptive. Leaders at many institutions have grasped the critical need for a more sustainable society, and they have called for a variety of exemplary responses such as the American College & University Presidents Climate Commitment. Colleges and universities will ultimately respond to demands from both internal and external stakeholders. Higher education may be approaching a tipping point, when it will soon be unacceptable to ignore sustainability as a guiding principle.

ENDNOTES

1. For information on several new centers at U.S. colleges and universities devoted to interdisciplinary thinking around environmental and sustainability issues, see Claudia H. Deutsch, *A Threat So Big, Academics Try Collaboration*, N.Y. TIMES, Dec. 25, 2007.
2. Vermont Law School, Environmental Tax Policy Institute (last visited Oct. 15, 2007).
3. University of Washington Law School, Law of Sustainable International Development Graduate Program, *available at* www.law.washington.edu/SID (last updated May 19, 2005).
4. The Beyond Grey Pinstripes survey is managed by the Aspen Institute Center for Business Education. *See* www.beyondgreypinstripes.org.
5. *See* Proceedings of the National Academies of Sciences website, www.pnas.org/misc/sustainability.shtml.
6. American University, Washington College of Law, Sustainable Development Law & Policy, www.wcl.american.edu/org/sustainabledevelopment (last visited Oct. 15, 2007).
7. Georgia Institute of Technology, Institute for Sustainable Technology and Development website, www.sustainable.gatech.edu/research.
8. SUSTAINABLE ENDOWMENTS INST., COLLEGE SUSTAINABILITY REPORT CARD 2008, *available at* www.endowmentinstitute.org/sustainability. There are more than 4,000 colleges and universities in the United States, including community colleges, serving about 15,000,000 students.
9. *Id.*, at 5-6.
10. *See* www.tufts.edu/tci.
11. Press Release, Yale University, Yale to Reduce Greenhouse Gas Emissions (Oct. 11, 2005), *available at* www.yale.edu/opa/newsr/05-10-11-02.all.html.
12. *See* www.presidentsclimatecommitment.org.
13. U.S. Green Building Council website, www.usgbc.org.
14. Based on data gathered by the Association for the Advancement of Sustainability in Higher Education (AASHE) and posted at their website, www.aashe.org.
15. Press Release, University of Denver, Sturm College of Law, DU Law School Building Earns LEED Gold Certification, *available at* www.law.du.edu/news/story.cfm?ID=56 (last visited Oct. 15, 2007).
16. Press Release, University of Colorado at Boulder (Apr. 2, 2007), www.colorado.edu/news/releases/2007/121.html.
17. *See* INSTITUTIONS OF HIGHER EDUCATION: A STUDY OF FACILITIES AND ENVIRONMENTAL CONSIDERATIONS, Spring 2006, *available at* www.universitybusiness.com/uploaded/pdfs/HiEdGreenFacilitiesStudyECNN.pdf.
18. Allegheny College Center for Economic and Environmental Development website, <http://ceed.allegheny.edu/>.
19. *See* <http://powershift07.org>.

20. Based on data gathered by AASHE, *supra* note 14.
21. Harvard University's Green Campus Initiative website, www.greencampus.harvard.edu.
22. For more detail, see www.greencampus.harvard.edu/greenliving-hls.
23. See www.recyclemaniacs.org.
24. It is estimated there were no more than 20 such positions in the United States in 2002.
25. See www.presidentsclimatecommitment.org.
26. Due to lack of space, the authors cannot mention all organizations supporting SHE in the United States.
27. Association for the Advancement of Sustainability in Higher Education (AASHE) website, www.aashe.org.
28. AASHE's major projects include supporting the signatories of the ACUPCC and developing a rating system for campus sustainability.
29. Campus Consortium for Environmental Excellence website, www.c2e2.org.
30. National Wildlife Federation's Campus Ecology Program website, www.nwf.org/campusecology.
31. See www.secondnature.org.
32. Created in 1990, the international Talloires Declaration is signed by a university or college president, rector, or chancellor. As of May 2008, the total number of signatories stood at 375, with U.S. signatories numbering 142. See University Leaders for a Sustainable Future website, www.ulsf.org.
33. U.S. Partnership for Education for Sustainable Development website, www.uspartnership.org.
34. New Jersey Higher Education Partnership for Sustainability website, www.njheps.org.
35. Pennsylvania Environmental Resource Consortium website, www.paconsortium.state.pa.us.
36. See description of consortium at Yale University Office of Sustainability website, www.yale.edu/sustainability/consortium.htm.
37. Higher Education Associations for Sustainability Consortium website, www.heasc.net.
38. Information on Disciplinary Associations Network for Sustainability at AASHE website, www.aashe.net/dans.
39. Ray Anderson, founder of Interface, Inc., has made this claim regarding his company and others. See www.interfaceinc.com.
40. The University of Georgia's Environmental Literacy Requirement is one example. See http://bulletin.uga.edu/bulletin/prg/uga_req.html#Environmental.
41. Ponderosa Project at Northern Arizona University website, <http://jan.ucc.nau.edu/ponderosa>; and Piedmont Project at Emory University website, www.scienceandsociety.emory.edu/piedmont.