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Practicing Sustainable Environmental Solutions: A Call for Green Policy in Academic Libraries

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conferences' lunches, dinners, and breaks. Most such centers are in the vanguard for waste reduction and recycling as well. Our organizations can also make the decision on principle to never again hold conferences in a city such as Las Vegas, Los Angeles, or Tucson. The very existence of these cities — as large urban centers at the least, and perhaps as places of permanent human settlement at all — defies ecological common sense at every turn. Conversely, we could reward communities that have implemented sprawl control and brownfield development initiatives with our conferences and the revenue that comes from them. The site selection for our conferences is, after all, a collective consumer choice. In 2000 the Organization of American Historians boycotted the Adam Marks Hotel in St. Louis for its annual meeting after evidence of widespread racial discrimination by the chain became public. The OAH then used their boycott and the publicity it generated as an opportunity for public education. Other organizations can make public statements about why and how they make sustainability-related decisions about conference sites.

I suspect — I hope — readers of this journal are sympathetic to the idea of reducing the ecological footprint of conferences. And I am quite certain there are dimensions to this issue I have not thought of. The topic might even merit a discussion at next year's meeting in Charleston (or anywhere else conferences are held, for that matter). In any event, the stakes are high. For in the long term — and intergenerational equity is at the core of sustainability — the kind of personal and professional existence many of us take for granted will not be possible without the revolution in values this essay has only begun to address. 🌳

Further Resources:
Reading

Peter Bardaglio and **Andrea Putnam**, *Boldly Sustainable: Hope and Opportunity for Higher Education in an Age of Climate Change* (2009).

Hermann Daly, "Economics in a Full World," *Scientific American* (2005).

Derrick Jensen, "The World at Gunpoint," *Orion Magazine* (2009).

Michael Lemonick, "Top 10 Myths about Sustainability," *Scientific American* (2009).

Michael M'Gonigle, Planet U: Sustaining the World, Reinventing the University (2006).

Bill McKibben, *Eaarth: Making a Life on a Tough New Plane*t (2010).

Further Resources:
Organizations and Websites

Association for the Advancement of Sustainability in Higher Education (AASHE) — *http://www.aashe.org/*

Second Nature: Education for Sustainability — *www.secondnature.org*

Talloires Network — *http://www.tufts.edu/talloiresnetwork/*

Terrapass (event footprint calculator) — *http://www.terrapass.com/event-carbon-calculator/*

Practicing Sustainable Environmental Solutions: A Call for Green Policy in Academic Libraries

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In recent years, librarians have taken a more proactive role in "green" practices and sustainable environmental solutions both in public and academic libraries. In order to fully understand this change, a short historical background might explain the proactive interest by academic libraries in environmental sustainable operations.

The 1970s brought dynamic changes in the American environmental movement when **Congress** passed both the *Clean Air Act* and the *Endangered Species Act*, DDT was banned, and the **Environmental Protection Agency** was created. On the first Earth Day in 1970, almost "ten million students from 2,000 colleges and 1,000 high schools participated in a wide variety of activities throughout the country."[1] Not only did students express their environmental concerns, but international environmental declarations also started making references to sustainability issues in higher education.[2] In 1990, the **University Leaders for a Sustainable Future (USLF)** signed the *Talloires Declaration*, which stated "universities bear profound responsibility to increase the awareness, knowledge, technologies and tools to create an environmentally sustainable future."[3] (See the *Talloires Declaration* on p.18.) In 2000 the declaration was signed by leaders from more than 275 universities, thus challenging higher education to introduce sustainable development concepts into teaching and practice. Academic libraries, as part of the university community, supported universities by building environmental collections, providing public access to environmental information, and promoting environmental literacy that leads to practical, sustainable environmental solutions.

Environmental sustainability is an important part of the sustainable development concept that evolved from theory into practice in Rio de Janeiro after the **1992 United Nation Conference** on Environment and Development (Earth Summit). Sustainable development advocates a balance between economic growth, social equity, and ecology "that meets the needs of the present without compromising the ability of future generations to meet their own needs."[4] Libraries' operations had the basic characteristics of sustainable practices long before the concept of sustainability gained a wider acceptance. The very principles around which libraries are built align with those of human, social, environmental, and economic sustainability. Library operations have been characterized by frequent borrowing instead of constant buying of information materials, and by the sharing of resources rather than the unnecessary duplication for current and future users.

The evolving information and communication technologies, growing information needs of users, and growing operational costs of libraries have been calling for long-term economic, social, and environmental sustainable development planning. While libraries continue to thrive in meeting the information needs of their users, behind the scenes they struggle with ongoing costs of collections, equipments, supplies, buildings, and utilities (water, electricity, gas, heating, and cooling systems). Without an increased base of funding these growing costs and lack of sustainable strategies in libraries negatively impact major libraries' values as framed by the **International Federation of Library Associations and Institutions (IFLA)** in Glasgow in 2002. Their *Statement on Libraries and Sustainable Development*

> declares that all human beings have the fundamental right to an environment adequate for their health and well-being, acknowledges the importance of a commitment to sustainable development to meet the needs of the present without compromising the ability of the future, [and] asserts that library and information services promote sustainable development by ensuring freedom of access to information.[5]

Academic libraries are adding more environmentally responsible practices in day-to-day operations and services offered to the users while working on reducing environmental waste and shrinking their "carbon footprint." But in a time of budget austerity and growing concessions to social responsibility, is this enough?

Reducing Libraries' Carbon Footprints

In September 2008 *Bloomberg.com* reported that "energy costs for U.S. colleges and universities soared 14 percent in the 12 months."[6] With the growing popularity of

electronic resources, the demand for energy consumption in libraries is also growing. For example, the library at the **Michigan State University (MSU)** — with 368 rooms and 457,300 square feet — is using 8,120 megawatt hours, which puts its building into the higher energy-consumption category among **MSU** buildings.[7]

According to the 2009–2010 Library Energy Conservation Benchmarks survey conducted by the **Primary Research Group (PRG)**, the mean annual rate of change in the overall energy consumption between 2008 and 2009 was 6.14 percent in public libraries and 1.6 percent in college libraries. Interestingly enough, only 4.55 percent of the surveyed public libraries audited their electricity bills in 2009, while the audit rate was 15 percent for college libraries.[8] This disparity may be partially explained by the fact that many college libraries located on university campuses do not pay for electricity themselves, but work closely with campus facility and sustainability offices. Sustainability offices were formed on campuses following the signing of the American College and University President's Climate Commitment (ACUPCC), and when colleges and universities joined the **Association for the Advancement of Sustainability in Higher Education (AASHE)**. Among many campuses the main **AASHE** program is Sustainability Tracking, Assessment & Rating System (STARS). It is a transparent, self-reporting standardized instrument allowing tracking and ranking progress toward sustainability at the campus level. Yet the STARS program does not include libraries as a separate entity in the nine selected areas on a campus (art/theater, cafeteria/dining, drains/sewers, grounds/vehicles, labs, medical areas, power plant, and waste management) that are subject to environmental regulations.[9]

The fact that libraries are not part of the STARS program is a curious lapse for measuring campus sustainability. Libraries and their buildings use significant quantities of energy, electricity, and water, as well as trees for paper. Although the **American Library Association (ALA)** has recently joined the action in reducing the use of paper, excessive paper use is still a large problem for libraries. According to the Green Press Initiative (GPI), "Each year, approximately 30 million trees are used to make books sold in the United States 1,153 times the number of trees in New York City's Central Park."[10]

Expanding the ecoconscious movement as well as the awareness of the growing library operational expenditure stimulated growth of conservation programs, green practices, and sustainable solutions in academic libraries. As the **PRG** survey showed, the most popular conservation programs among libraries were projects concentrated on decreasing energy spending, such as installing energy-efficient lighting. More than 68 percent of libraries installed high-efficiency light bulbs, 27 percent

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of college libraries introduced motion sensors, and 7 percent introduced atriums or skylights. Almost 16 percent of libraries planned to replace single-panel windows with double-panel windows and introduce better sealed windows. In further efforts to conserve energy, more than 60 percent of libraries are shutting down computers when the library is closed to the public. In an effort to lower power consumption, 65 percent of monitors operated in libraries are based on LCD technology.[11]

Need for Green Policy in Academic Libraries

Although libraries are actively participating in reducing their environmental impact they still have not resolved the dispute about which format — print or electronic — is more environmentally friendly. As **Virginia Connell** and **Carl B. Ylvisaker** stated, "the problem of reducing a library's carbon footprint is perhaps the most complex and most contentious when it comes to the format of the collection."[12] The debate on print versus electronic started early, but it still is not fully resolved in regard to the financial burden on libraries and their carbon footprint. The popular opinions that paperless libraries could be cheaper and more environmentally friendly are not fully proven. With the growing amount of databases, electronic journals, eBooks, digital repositories, archives, digitally borne collections, and numeric and geospatial data, academic libraries serve users more as data centers, storage, and study places. **Deborah Puretz Grove** and **David Rosenberg** classify four data centers with different business models: Internet server farms (**Amazon**, **Google**, **Microsoft**, and **Yahoo**); collection services (**Savvis**, **Equinox**, **Switch & Data**); enterprise data centers (owned and operated by the corporation that uses it); and server closets (less than 465 square meters).[13] The infrastructure for data centers requires electricity for power and cooling, and according to an **EPA** report "data centers can be more than 40 times as energy intensive as conventional office buildings."[14]

In order to progress further in greening academic libraries, it is time to develop a framework consisting of principles, standards, and practices that would focus more on col-

lections, resources, and services rather than on buildings. Creating a green library policy requires developing sustainability indicators that could be used to measure and assess more than recycling programs or a vendor's green practices. Libraries need hard data on how much energy and money goes to making and storing their print collection versus how much goes to creating and storing their electronic resources. Indicators measuring libraries as environmental consumers of computers, paper, water, electricity, energy, and ink must be developed or adopted from already existing university practices. Libraries have not crafted such indicators to track their progress toward reducing the social, economic, and environmental impacts of solid and hazardous waste and energy use.[15] Working closer with campus sustainability offices would help libraries develop indicators measuring their progress toward reducing their environmental (carbon), economic, and social footprints.

Conclusions

Using the Web and social networking tools, librarians have created green blogs, wikis, newsletters, and an open-access journal devoted to ecological issues. They share environmentally friendly practices, exchange ideas on sustainable environmental solutions, and participate in disseminating scholarly environmental information. The popularity of these resources is demonstrated by their impressive online access statistics, indicating the high level of interest in sustainable practices and new ideas on greening libraries.

But as **Katherine Dike** stated, many library services incorporate green practices, in particular recycling, in the absence of institution-wide green policies.[16] The creation of institutional green policy needs to be integrated into libraries' collection policies, services to the public, operation of the buildings, licenses with vendors and publishers, preservation and digitalization policies, and purchase of equipment and products. This is why an objective assessment of sustainable environmental practices is needed in order to concentrate on those practices that support broader goals of human, social, and economic library sustainability and promote the future sustainable growth of libraries. 🌿