

**Applying the Campus Sustainability Assessment
to the University of Kansas Lawrence Campus**

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Over the past two decades, colleges and universities have begun to seriously examine their impact on the natural environment. Although college campuses were the scene of environmental discussion and activism as early as the 1970's, the release of "In Our Backyard: Environmental Issues at UCLA" in 1989 sparked an interest in qualitatively measures of a campus's impact on the natural environment (Bardati, 2006). This cooperative masters thesis and the environmental assessments that followed focused heavily on eco-efficiency, examining measurements and strategies for reducing waste and resource consumption.

More recently, however, assessments have broadened from a strictly environmental evaluation to an assessment of sustainability. While sustainability has most simply been defined as "meeting the needs of the present without compromising the ability for future generations to meet their needs", it has grown to include aspects of environmental quality, economic stability, social equality, and the general health and well-being of all populations.

A range of indicators have thus been used to measure progress towards sustainability. Most institutions of higher education (IHE) have chosen to base assessments on a select set of indicators, focusing on what they view as the most important to their specific campus. More comprehensive assessments include a checklist of systems (transportation, energy use, water use, etc.) evaluating measurable indicators within each system. For example, an assessment developed by the New Jersey Higher Education Partnership for Sustainability scores "attainment of sustainability" on a scale of 1 to 7 for 30 indicators of systems ranging from indoor air quality to academic curriculum¹. A more simplified approach evaluates progress towards established goals of sustainability in only 5 categories: Energy Use, Water Use, Use of Resources, Emissions to Land, Water and Air, and Use of Land (Graedel, 2002). Yet no single set of parameters has been defined as a standard for measuring the sustainability of an IHE.

Evaluating an IHE on the concept of "sustainability" can therefore be a daunting task. The ambiguity of the term itself has made it difficult to establish comprehensive measures of sustainability (Shriberg, 2002). When compiled with the diverse systems involved and the scale of time required to achieve sustainability in these systems - the National Resource Council Board on Sustainable Development suggested a target time of two generations, or approximately 50 years (Graedel, 2002) - establishing measures of sustainability becomes even more difficult.

Despite these challenges, the structure and function of an IHE make it an ideal testing ground for assessing sustainability. IHEs perform a variety of functions ranging from education and research to land stewardship and financial investment. Such a broad reach allows for the

¹ "Campus Sustainability Selected Indicators Snapshot" available online. Accessed July 23, 2007.
<<http://www.njheps.org/assessment/guide.htm>>

examination of multiple systems connected on a single campus that might otherwise only be found on a municipal or regional scale. Most IHEs also have missions that support research, learning and service, distributed among a diverse set of disciplines. These qualities allows for research and innovation necessary to develop new practices and policies across multiple systems. Furthermore, many IHEs have histories that span centuries and are established to withstand societal changes. Real changes and progress towards sustainable systems can occur slowly (Bardati, 2006), and the stability of IHEs allows for the evaluation of processes and monitoring of progress over a period of decades (Graedel, 2002).

Examining change both qualitatively and quantitatively over time is often cited as one of the most important characteristics of a campus sustainability assessment (CSA). Critics of the process stress the importance of conducting ongoing monitoring and assessment of systems (Calder et. al, 1999), including the establishment of infrastructure to maintain the process (Callier, 2001). T.E. Graedel (2002) defines the goal of sustainability as a “system that allows for fluctuations within an envelope of survivability”. Constant monitoring, even upon reaching what is assumed to be a sustainable state, is therefore essential to maintaining a stable system within certain bounds.

Beyond monitoring progress, a CSA can be performed for a wide range of reasons including identifying opportunities for costs savings through resource conservation, enhancing public image by being a “good community neighbor” (Callier, 2001), and identifying and correcting negative actions to reduce the risk of liability (Bardati, 2006). Most commonly though, CSAs are employed to establish baseline data on the environmental and cultural impacts of an institution, identify areas for improvement, and allow for more effective strategic planning (Shriberg, 2002).

No matter what the reason for conducting a CSA, assessments have a wide range of benefits for an IHE. Participation in the process helps educate those involved about the functions of their campus and the broader impacts of a large institution. Assessments also build campus momentum in a more sustainable direction by making the campus community more aware of these impacts. A study at Western Michigan University that compiled over 800 CSAs concludes that effective assessments:

1. Ensure the long-term success of an institution
2. Provide a valuable service-learning opportunity to students
3. Ensure regulatory compliance
4. Reduce liability of risk
5. Reduce costs of operation and maintenance
6. Enhance the quality of the working and learning environment
7. Build a more vital campus community
8. Enhance town-and-gown relations (cooperation and information transfer with the local community)
9. Enhance the institutions public image as a “good social and environmental citizen”

10. Identify “best practices” and benchmarks for cross-institutional dialogue and comparison (Nixon, 2002).

Sustainability assessments allow an institution to analyze the various systems in place, set long range goals, minimize impacts, and monitor progress. In the context of a college campus, a CSA provides unique learning opportunities and helps build positive relationships both on and off campus. By employing the CSA process, an IHE can fulfill its missions of education, research, and service to the campus and surrounding community while addressing environmental, economic, and social impacts on a global scale.

Conducting a CSA at the University of Kansas

Although the University of Kansas has a history of faculty, staff, and student involvement in attempts to address the environmental impact of the KU campus, efforts have been limited to focused projects. In the late 1980’s and early 1990’s, the Environmental Ombudsman’s Office coordinated student projects that evaluated specific environmental issues. Their efforts lead to the development of a campus recycling program and the installation of low-flow water fixtures but did not succeed in addressing a broader approach to evaluating the institution. Individual courses and student projects since have also focused on specific aspects of campus sustainability such as storm water recovery, building-specific energy efficiency, and localized recycling services. While these efforts have lead to further evaluation, a comprehensive CSA has never been performed.

However, developments in recent years have created the necessary framework to effectively conduct a comprehensive CSA at KU. In 2004, Provost David Shulenburg appointed a task force to study the feasibility of establishing a center for research and project implementation that would make “campus operations more friendly to the environment and to guide future campus growth in environmentally responsible directions.”² The appointed task force studied the systems and policies in place at KU and made recommendations in the Spring of 2005, focusing on the following components:

1. Creating a Center for Sustainability that will serve students as a centralized hub for coordination of sustainability activities and research through center staff and an ambassador network comprised of faculty, staff and students.
2. Revising and implementing the Campus Environmental Policy, to include establishing goals, timelines, and an annual review process (University of Kansas STF, 2005).

In 2007, the first of those objectives was realized when the establishment of the KU Center for Sustainability (CFS) was established under the Vice Provost for Scholarly Support. The center has a mission to “promote a culture of sustainability on campus” and “facilitate research, learning opportunities, policies, and practices that address environmental, economic, and social

² September 23, 2004 email correspondence from Provost David Shulenburg to members of the task force.

responsibility”³. The center’s mission alone lends to supporting a CSA, as the components identified are directly linked to the purpose and outcomes of CSAs.

The Center for Sustainability also provides a structure for carrying out such an assessment. One goal of the center is to develop a network of faculty, staff, and student ambassadors, in part to foster cross-disciplinary discussion of issues important to the campus community. This network could serve as a recruitment tool to locate individuals with expertise in the specific areas assessed. In developing a CSA, a team effort has been strongly recommended as an effective approach (Bartati 2006; Callier, 2001; Nixon, 2002). With a diverse representation of campus, a CSA team can develop diverse strategies, take advantage of the expertise of individuals from specific fields of study, and better communicate with the entire campus community (Callier, 2001).

Assembling a CSA team from this network could also help build the administrative support necessary to implement any recommendations developed by the CSA. Nixon’s 2002 study of CSAs concluded that team assessments gaining the greatest administrative support were compiled by faculty and staff. Although KU has a strong Environmental Studies Program that could contribute to the CSA process, student projects have not received critical administrative support, and Nixon goes as far as claiming that it would be “disastrous” to rely on a student course to carry out a CSA. Instead, students should be involved in the process by contributing research and further study of specific strategies for meeting the goals of the CSA. This would allow for valuable service-learning opportunities while generating a sophisticated report capable of gaining support from administration and the campus community.

The second focus of the Sustainability Task Force report – revising the environmental policy – was not directly addressed in establishing the Center for Sustainability. The policy was revised in December 2005, but the process was completed internally by the Department of Environment, Health, and Safety and did not address improvements intended by the task force. However, the principles and objectives of the policy do establish precedence for monitoring and mitigating environmental impacts. The opening statement of the policy draws attention to the responsibility of the entire campus community in addressing these concerns:

The University of Kansas, Lawrence Campus is committed to being a positive and creative force in the protection and enhancement of the local and global environment through its teaching, research, public service, administrative and support operations. Recognizing that some of its activities, because of their scale and scope, have significant impacts on the environment, the University as an institution, and all members of the University community, have a responsibility to act in ways consistent with (these) principles and objectives.⁴

³ Center for Sustainability Mission Statement as published online. Accessed July 24, 2007.
<<http://www2.ku.edu/~sustain/mission.shtml>>.

⁴ Environmental Policy as published on the Department of Environment, Health, & Safety website. Accessed July 25, 2007.
<http://www.ehs.ku.edu/documents/ehs_policies/environmental_policy.asp>.

Although heavily focused on eco-efficiencies such as minimizing energy and water use, the objectives of the policy address the major functions Gradel (2002) recommends for inclusion in a CSA: Energy Use, Water Use, Use of Resources, Emissions to Land, Water and Air, and Use of Land. Adding a social component to these basic guidelines would not be difficult to support given the principles in the policy to minimize impacts, conserve resources, and respect natural systems.

Given the mission of the Center for Sustainability and the support for addressing environmental impacts and protecting natural systems noted in the campus Environmental Policy, involving the campus in a comprehensive CSA is the logical “next step” in moving the campus towards a sustainable future. The following outline details a possible course of action for this process:

1. Identify functional systems – To ensure a comprehensive approach, the Center for Sustainability, with support from the ambassador network and advisory board, should review relevant literature and identify the major functional systems of the campus. As noted above, systems could be based on the issues identified in the Environmental Policy, with the addition of cultural and educational systems.
2. Establish a CSA team – Drawing membership from the sustainability ambassador network, assemble a team of faculty, staff, and students to conduct the CSA. Membership should represent the diversity of campus and the expertise needed to assess the many functional systems of the institution.
3. Identify indicators – The CSA team should select measurable indicators to chart baseline conditions and monitor progress towards sustainability for each system. Until a standardized CSA is developed, quantitative measurements should reflect those currently being used by other campuses (such as those developed by New Jersey Higher Education Partnership for Sustainability, Association for the Advancement of Sustainability in Higher Education,⁵ or the Campus Sustainability Assessment Project at Western Michigan University⁶) to allow for ease in monitoring progress and making cross-campus comparisons. Qualitative measures should also be included to ensure inclusion of social and cultural components and to provide an overview of practices that is comprehensible to a diverse set of stakeholders, including the campus community and alumni.
4. Identify goals – For each system, establish an expected outcome that reflects a sustainable state. For example, a sustainable state for energy use would be a campus operated on 100% renewable sources. A timeframe of 50 years may be appropriate for achieving sustainability

⁵ See the Sustainability in Higher Education Assessment Framework, available to AASHE members online at <http://www.aashe.org/resources/sheaf.php>.

⁶ Guidelines for this assessment are in development and are currently available for download at http://csap.envs.wmich.edu/pages/res_guidelines.html.

for most systems. However, intermediate benchmarks for each system and individual indicators should also be set to monitor progress throughout the process.

5. Compile baseline data – Relying on the individual expertise represented on the CSA team, compile and analyze data for each indicator. Data collected should measure progress towards the goals set in Step 4. For example, data collected on energy use would reflect the proportion of energy generated from renewable sources compared to non-renewable sources.
6. Develop recommendations – Recommendations, including specific strategies for progressing towards a sustainable state, should be developed for each system and be measurable through the established indicators. Student input through service-learning courses and independent projects could be instrumental in identifying and prioritizing potential strategies and innovations. Recommendation should be supported with existing examples and rationale for selection and prioritization (Nixon 2002).
7. Establish monitoring strategy – Ongoing monitoring and evaluation will be essential to successful implementation of recommendations. The CSA should include recommendations for tracking progress to include the frequency of re-evaluating systems and identifying responsible parties.
8. Produce CSA report - Produce a comprehensive report detailing the current status of campus, goals for achieving sustainability, and recommendations. The report should highlight programs and practices already in place that support progress towards sustainability and be designed to reach a broad audience.
9. Obtain administrative support – Before releasing the report to the campus community and the general public, it should be reviewed and approved by the Provost and/or Chancellor⁷.
10. Distribute report – The report should be made available to the campus community, alumni, municipal leaders, legislators, and other key stakeholders. Campus events and forums should be scheduled to provide information and gather feedback. Publicity for the project should be sought through these events and the issuance of press releases.
11. Seek action on recommendations – The Center for Sustainability should play a key role in coordinating research, education, and fund development within the campus community to ensure implementation of recommendations. The CSA could serve as a basis in developing a comprehensive strategic plan for the center.
12. Monitor and report on progress – Continue ongoing evaluation and updates to the report as determined in Step 7. Provide updates to stakeholders and the general public.

Other considerations to ensure success throughout the process include:

⁷ The 1989 UCLA report was released to the public prior to administrative review which may have resulted in subsequent failure to gain administrative support.

1. Obtain administrative support at the beginning of the process and keep administration updated on progress throughout the development of the CSA.
2. Focus on the systems, motivations, and decision-making processes of the campus to avoid limiting the CSA to a measure of eco-efficiency alone (Shriberg, 2002).
3. Consider how sustainability fits into the mission and purpose of the institution and individual departments (Calder, 1999).
4. Evaluate social indicators and indirect effects associated with each system (Nixon, 2002)
5. Recommend incentives for achieving the established goals at various levels within the campus community (Shriberg, 2002).
6. Involve stakeholders (faculty, staff, students, administration, investors, alumni, etc.) in the process, especially when establishing recommendations, to ensure that the evaluation procedures and recommended strategies can be executed effectively within established systems and that stakeholders will provide the necessary support for recommended initiatives.

The campus environment at the University of Kansas is ripe for the development of a Campus Sustainability Assessment. There is considerable interest from a wide range of campus departments and organizations in promoting practices that reduce our impact, and student projects have highlighted areas for environmental improvement. The Center for Sustainability provides the necessary infrastructure and organizational mission to support and maintain the CSA process. Backed by a supportive campus community to carry out the initial research, the University of Kansas has a unique opportunity to strengthen inter-departmental relationships, establish measurable goals, and begin implementing strategies that will lead to a more sustainable future for KU.

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