# Report of the Sustainability Scholarly Learning Community

--Ernest J. Yanarella, Coordinator, and Members of the
Sustainability Scholarly Learning Community
February 9, 2011

## Introduction

The Sustainability Scholarly Learning Community (SSLC) began meeting in October 2009 and has met periodically over the course of these past three semesters. The SSLC membership included the following faculty and administrative staff personnel: **Mary Arthur** (Department of Forestry), **David Atwood** (Department of Chemistry and Environmental Studies Program), **Arne Bathke** (Department of Statistics), **Robert Dahlstrom** (College of Business and Economics, Center for Sustainable Marketing), **Carol Hanley** (Tracy Farmer Institute for Sustainability and the Environment), **I.S. Jawahir** (College of Engineering, Center for Sustainable Manufacturing), **Richard S. Levine** (School of Architecture and Center for Sustainable Cities), **Anne Mareck** (Department of English), **Keiko Tanaka** (Community Leadership Development), **Shane Tedder** (Office of Sustainability), **Mark Williams** (College of Agriculture, Sustainable Agriculture Program), and **Ernest J. Yanarella** (Department of Political Science and Center for Sustainable Cities) Its avowed goal was to generate ways of raising the profile of sustainability across the University of Kentucky campus to reflect the growing need to prepare UK students for a twenty-first century world that will be significantly refashioned by emerging trends in:

--fossil fuel usage and depletion;

--ecological scarcities in other natural resource reserves;

--climate changes affected by the uneven warming of the world caused in large measure by the build-up of $CO_2$ in the atmosphere;

--world population expected to rise to around 9 billion by the latter half of the century;

--and urban and rural restructuring triggered by the consequences of the above.

At the end of its first full year of meetings and discussions, it seems appropriate to engage in some stock-taking and offer preliminary recommendations that have grown from these periodic discussions and accompanying email exchanges among its members. A report seems especially propitious, given that the SSLC plans to change directions during the Spring and Fall 2011 semesters. The section that follows presents some of the ideas and suggestions that have emerged from the SSLC and the activities of some of its members in other committees and forums around the campus.

Recommendations:

**Recommendation #1:** ***Connect existing and emerging sustainability, environmental science, and natural resources curricula across the campus.*** Like any large and sprawling research extensive university, the University of Kentucky suffers from breakdowns in communication and failures to integrate aspects of undergraduate and graduate curricula across Colleges. Not only does this work to the detriment of students. It also denies faculty members in different College the opportunity to achieve better integration of their disciplinary expertise into a wider multi-, inter-, and even transdisciplinary context for engaging complex social and environmental problems that defy answers through knowledge and tools confined to disciplinary boundaries. A recent compilation of data by the Tracy Farmer Institute for Sustainability and the Environment (TFISE) has identified 170 individual faculty in the UK campus who specialize and conduct research in environmental science and sustainability areas. Moreover, in the realm of environmental science and sustainability in the undergraduate curriculum, the College of Agriculture claims two undergraduate programs (Natural Resources and Environmental Science and Sustainable Agriculture), the College of Business and Economics one (marketing), the College of Engineering one (manufacturing), and the College of Arts and Science one presently, but another (and perhaps one more) in process within the year. These existing and emerging programs in environmental studies and sustainability provide the opportunity to link curricula and programs across the campus and among Colleges by taking advantage of specialty support elements (e.g., Sustainability Agriculture major) and the modular approach being built (e.g., NRES) that will encourage cross-college fertilization. Such cross-fertilization will enhance development of mixed enrollments from different Colleges in an array of courses while expanding the interdisciplinary scope of these new and existing programs.

**Recommendation #2:** ***Enhance post-baccalaureate education and advanced degrees in environmental science and sustainability programs.*** Through the coincidence of innovative thinking of a new college dean (Mark Kornbluh) and the initiative of a new director of the Environmental Studies minor program (David Atwood) in the College of Arts and Sciences, steps have been taken this past Fall 2010 semester to develop a BA degree in environmental and sustainability studies, using the environmental studies minor program as the springboard, that may be instituted as early as the Fall 2011 semester. This new program should be a catalyst for post-baccalaureate and doctoral programs in environmental science and sustainability on campus. Several other SSLC members have developed a PhD program in natural resources and environmental science that would draw faculty and students from at least two Colleges. The emerging green economy will call for a number of different combinations of disciplinary and interdisciplinary knowledge and expertise, and a primary goal of the SSLC is to develop new and creative approaches to delivering a breadth of educational opportunities in environmental science and sustainability. New and creative graduate programs at Arizona State University, Portland State University, the University of Washington, and Washington State University, and other innovative efforts, reflect the needs and demands of local, regional, national, and global problems and issues emergent in this new century of peril, possibility, and opportunity. The University of Kentucky should be ambitious in

being listed alongside these innovative new programs. (See Recommendation #3 for further approaches to making this happen.)

**Recommendation #3:** ***Pursue grant funding for major curriculum development initiatives at the undergraduate and graduate levels that are cross-college and university-wide in nature.*** As a recognized research intensive university with an honored land-grant tradition, the University of Kentucky has the opportunity to draw upon its many manifestations of environmental concern and recognition of the need for courses in the area of sustainability by actively seeking funding for these initiatives. A research team from the many centers, institutes, curriculum programs, and committees populating its landscape should be assembled through the offices of several College deans, associate provosts or the provost to undertake major curriculum development initiatives at both the undergraduate and graduate levels along these lines. Experienced grant-writers among the SSLC have expressed willingness to be a part of this enterprise. The very breadth of interests and range of expertise in sustainability already manifested on this campus demonstrates that a critical mass of faculty and administrative staff is available to move this effort forward.

For at least a decade, the Environmental Systems (ES) graduate certificate served a valuable role in augmenting graduate student training in individual areas of the social sciences, business, and engineering to enhance the preparation and attractiveness of masters and doctoral students in seeking academic positions in environmentally-related programs in institutions of higher learning. Several graduate level programs, including NSF IGERT Programs and the Superfund Program required students to take ES courses. Programs like these offer opportunities to kick-start these efforts in a manner that can hasten the training of a new generation of future professionals from our graduate programs and building a curriculum infrastructure to perpetuate this process.

New interest has developed in reactivating and re-inventing this graduate certificate program in a more encompassing framework and through a different means of delivery. Discussions have been initiated by Mark Schneider with Carol Hanley of the Tracy Farmer Institute and Ernest J. Yanarella of the SSLC to explore such reactivation and reinvention. While there will no doubt be hurdles to overcome, the benefits of undertaking a concerted effort to enlist faculty, generate external funding, and institutionalize a new Environmental & Sustainability Systems certificate program for graduate students are deemed sizable and attractive for this University. The prospect of converting the old ES graduate certificate into an online venue would help to accommodate off-campus and non-traditional students and professionals seeking such certificate.

**Recommendation #4:** ***Find venues like the annual Common Reading experience, new General Education curriculum, and inchoate Thematic Year program to inject sustainability as a core feature of the undergraduate curriculum experience and campus life.*** To be effective in educating and training new generations of undergraduates into the meaning, value, and necessity of sustainability in their professions and lives, sustainability will need to be dispersed

throughout the undergraduate (and graduate) curriculum at this institution. The University's Sustainability Policy Statement and Principles already addresses the need of this institution of higher education to be an exemplar to the wider community and to other social institutions. Within our teaching mission, a host of venues within the current undergraduate curriculum and bearing upon it must be sought out to influence and shape student exposure to the many dimensions of sustainability in this evolving century and to the new needs and possibilities attendant from it. The annual Common Reading Experience provides an opportunity for the university community—students, faculty, administration, and staff—to engage a common book reading tied to a visit and lecture by its author as a focal point for intellectual discussion and debate. Many challenging sustainability-themed works of fiction and non-fiction are available. One has already been chosen for next academic year's common reading. The new general education curriculum is another area where sustainability can extend its roots. Although this theme has not been a prominent feature of the new program, opportunities for novel courses in a variety of areas are available. Finally, the College of Arts and Sciences is in the process of initiating a thematic year program simultaneously with the consideration of a thematic year program proposal as one of the finalists in this year's QEP competition. While many excellent themes for coordinating a year's set of readings, programs, panels, and speakers come to mind, sustainability strikes us as one encompassing theme that could unite this campus and its many Colleges for a year-long dialogue That could be augmented by the many other sustainability initiatives dotting the UK research and curricular landscape.

**Recommendation #5:** ***Develop a process by which courses in the University Bulletin are designated as "sustainability-related."*** With the proliferation of sustainability curriculum programs across Colleges, designation of courses as "sustainability-related" would be invaluable to students and faculty alike. The process for doing so would be two-fold. First, a curriculum review work group would be formed to develop a set of criteria for courses that would receive this designation. Equipped with these criteria, the group would identify existing courses that meet the standards and--with the approval of faculty teaching those courses--would request that the registrar's office assign an "S" after the course number. A second component of the process would involve establishing the procedure by which faculty could petition to have courses that they teach and/or develop be so designated. This policy has been instituted at Indiana University and should pay similar dividends for the University of Kentucky. (See: https://stars.aashe.org/institutions/indiana-university-bloomington-in/report/2011-01-05/1/3/14/)

**Recommendation #6:** ***Fashion a coordinated plan to seek out a benefactor or set of donors to fund either an endowed chair position in sustainability or three faculty hires dedicated to coordinating curriculum and research efforts spanning several Colleges (e.g., Agriculture, Arts & Sciences, Design, Business and Economics or Engineering) .*** One measure, but certainly not the only measure, of the seriousness of this University in embracing sustainability is the establishment of an endowed chair in sustainability in one of its Colleges. Sustainability has a modern history at least 25 years long, even as its roots go back many centuries. Work in various disciplinary and interdisciplinary fields has now matured enough that leadership in the theoretical,

scientific, and humanistic study of sustainability has become possible. Similarly, individuals identified for their significant initiatives and achievements in model sustainability programs and policies are widely known. A recognized leader chosen for such an endowed chair could be mandated to work with existing and evolving groups across campus to enhance and facilitate greater coordination of sustainability curriculum and interdisciplinary research.

Alternately, the cluster hiring of three faculty from three Colleges whose job descriptions entail a close working partnership across Colleges might be a less expensive, but no less valuable, way of enhancing greater coordination and integration of research, teaching, and service across the campus. Visionary leadership among college and university administration can do much to help to shape the University of Kentucky's national reputation and international image as a rising institution committed to positive social change in the face of immense challenges of this century by elevating this priority to a high place on its fund-raising agenda. Other universities in North America have taken similar steps. The top-twenty ambitions of the University of Kentucky should both follow those examples and find its own unique ways to contribute to a sustainable future.