Sustainability News

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Like the turning colors on our campus trees, change is in the air across the University, and there’s never been a more exciting time for sustainability at Michigan. This was made clear on September 27, 2011, when President Mary Sue Coleman delivered a landmark address outlining the University’s commitment to this all-important field. “Let me be clear,” President Coleman said, “Sustainability defines the University of Michigan.”

As Special Counsel to the President for Sustainability, I am fortunate to be able to play a role in helping advance the University’s sustainability commitment. But let me be clear; the change taking place across our campus is the work of many, many dedicated students, faculty, and staff from all corners of the University – and the more the merrier.

The Graham Institute exists to engage the full campus community and external collaborators to develop hands-on learning opportunities, co-create solutions for complex sustainability problems, and cultivate future sustainability leaders. In listening to President Coleman describe so many recent U-M accomplishments, it was rewarding to reflect on the role our Institute has played in helping to effect this change. I want to specially call out the terrific staff at the Graham Institute, a team of outstanding professionals that know how to build teams, engender trust, create opportunities, and always put U-M first.

Back in 2008, a savvy group of students approached us with an idea to connect dozens of sustainability-minded student groups from across campus and to serve as a unified student voice in working with the U-M administration. Thus began the Student Sustainability Initiative (SSI), which we have sponsored and mentored ever since. In her speech, President Coleman emphasized how students shape the University in unexpected and profound ways, and called out the SSI directly saying “They are formidable, they have pushed us as an institution, and we owe them our thanks.”

Not surprisingly, a great deal of President Coleman’s speech highlighted the work and outcomes of the 20-month Campus Sustainability Integrated Assessment (CSIA) that was led by our Institute. This was a truly remarkable effort involving some 500 members of the University community who came together to truly change the way we work together across academics and operations. This was not only an opportunity to “get it right” in terms of creating a more sustainable campus, but also a terrific learning opportunity for the 80 students who served on analysis teams and a very visible example of the value created through the multidisciplinary, stakeholder driven Integrated Assessment process. As a result, “IA” is now part of the vernacular on campus.

Beyond the quantifiable goals that the CSIA produced, President Coleman emphasized the role of new education and behavior change programs in driving progress toward campus sustainability. These new efforts – a student-led fund to launch high-visibility campus sustainability projects; the Planet Blue Ambassadors peer-to-peer education program for both students and staff; a world-class longitudinal survey assessment of campus sustainability knowledge, attitudes, and behavior that will inform a unique set of cultural metrics; and participation in the STARS transparent reporting program – will all be led by the Graham Institute.

Noting the breadth of our curriculum and research, the President proudly described how the University has more than 600 courses with sustainability content and more than 500 faculty with expertise in sustainability issues. This is indeed an impressive inventory and one made possible through a pair of databases developed and maintained by the Graham Institute.

President Coleman also highlighted the development of guiding sustainability research themes for the University – Climate, Water, and Communities – an effort that we led in consultation and partnership with dozens of faculty throughout the campus. She also pointed to several innovative educational programs across our campus – a truly remarkable list that includes the Graham Doctoral Fellows and Undergraduate Scholars programs.

We are a small organization that is big on ideas. We continually strive to build partnerships that will move the University of Michigan forward on sustainability – in education, research, operations, and engagement. We are not responsible for the vast success this great institution has achieved in advancing sustainability, but we are proud of the important role we’ve played. We will continue to build bridges across campus and with the world to make the University of Michigan – Leaders and Best.
The University of Michigan is expanding and transforming how academics and operations work together to solve problems and educate our students. The recently completed Campus Sustainability Integrated Assessment (CSIA) and newly launched Planet Blue Ambassadors Program are two prime examples of this change-making on campus.

The Graham Sustainability Institute launched the CSIA in January 2010 in partnership with the Office of Campus Sustainability (OCS) to examine how the university could improve the sustainability of campus operations.

More than 500 faculty, students, and staff representing 101 units and 27 academic programs were involved in the CSIA, which—after a systematic, 20-month process—culminated in the ambitious campus sustainability goals President Coleman announced on September 27, 2011. (See goals on page 6.)

“The reason so many people were involved is because collaboration and engagement is at the very crux of the Integrated Assessment (IA) process we used to help arrive at the goals,” says Drew Horning, deputy director at the Graham Institute. “In fact, one of the primary objectives of the CSIA was to involve the full U-M community in capturing ideas for a campus sustainability strategy, as well as to use the campus as a learning laboratory.”

The dialog about how university operations could be more sustainable began as soon as the CSIA was launched in January 2010. That’s when the Graham Institute and the OCS invited the campus community to give their input at a series of Town Hall meetings on campus, as well as through an idea and comment submission form on the Graham Institute’s website.

After hundreds of ideas were compiled and organized, seven faculty-led and student-staffed Analysis Teams worked with key Operations staff to investigate seven core issues of campus sustainability: Buildings, Energy, Land and Water, Food, Transportation, Purchasing and Recycling, and Culture. Working in two systematic phases, these teams conducted months of research, analysis, and benchmarking. They submitted their findings to an Integration Team, which then used the data to develop a final report with recommended sustainability goals and actions related to four overarching themes: Climate Action, Waste Prevention, Healthy Environments, and Community Awareness.

“I’m very happy with where the assessment ended up,” says Prof. Scavia, Special Counsel to the U-M President on Sustainability, “We have a solid, comprehensive plan that cuts across all aspects of sustainability on campus. But on top of that, because of the input of so many people involved—students, faculty, and staff—I think we have buy-in for its implementation, which is really the most important part.”

Although the CSIA is complete and the commitments have been officially announced, collaboration and hands-on engagement among U-M community members is only beginning. This is where education, awareness, and behavior change come into play—with programs like the Planet Blue Ambassadors Program playing a key role.

The Planet Blue Ambassadors Program is a student outreach and education program, through which students model and promote environmentally and socially responsible behavior in Residence Halls and earn academic credit in the process. It was recently launched as a collaborative effort between the Graham Institute and the OCS.
How would you describe the “Sustainable Neighborhoods in Detroit” class?

This class was a cross between urban planning and sustainability. It was incredibly interdisciplinary and gathered around 25 students from across U-M, from engineering to environmental science to public policy. We spent the winter semester learning about Detroit’s history, food systems, transportation, built environment, environmental health, and culture. We also took a number of field trips to Detroit on the weekend, exploring different areas of the city.

Near the end of the semester, we started learning about the Detroit River International Crossing (DRIC) project, an effort to build a second (but publicly owned) bridge to Windsor, Ontario. It would be constructed through the neighborhood of Delray in southwest Detroit. Our task was to do field research, hold community meetings, and propose an urban plan for the neighborhood in case the bridge was built. We also had time in Detroit to soak up its diverse and interesting culture, and try to see the city beyond the common stereotypes.

In what way do you think this class differs from other field-based courses at U-M?

This class was exceptionally applicable, timely, and relevant. Because what we were doing had such “real world” applicability, instead of the usual theoretical classroom work, made for an excellent and interesting field experience. We were working on a current and pressing problem, which made us much more dedicated and involved (and class that much more fun).

What is the unique sustainability challenge in the region where you were studying?

The neighborhood of Delray is in the heart of I-75 and a number of large industrial plants. Consequently, it is in the most polluted zip code in Michigan with a toxicity score of 2576 (the median Michigan zip code score is 18). It’s also one of the poorest areas of Detroit, likely explaining why highways and industry have found little resistance. This combination made for an incredibly unique challenge.

We were wrestling with some tough questions. For example, should the new bridge project be supported because of the potential economic benefit to the area? Or should it be opposed because it will bring thousands of new vehicles through the area, resulting in even more air pollution? This dilemma made our class grapple with questions of what “sustainability” really means. For many of us, this meant looking beyond the most
commonly examined aspect of sustainability – environmental – and looking more at community and financial sustainability.

**What are the most meaningful things you learned from this class?**

By working directly with neighborhood residents, I learned the importance of always remembering the human side of things. Often times when we think of the big environmental challenges of our day, it’s very abstract. While nobody in Michigan would be pleased to hear about the economic and environmental challenges in Delray, it’s pretty easy for us to think, “oh, that’s unfortunate,” and then move on with our day.

By living in Detroit and getting to know the Delray residents on a personal level, it became much more personal for us. We were emotionally invested in the community, and we really wanted to help make things better for the residents.

**Do you think you made an impact where you studied? If so, how?**

I think we had a big effect on the community. They were incredibly excited to have us in Delray helping them, and we formed many relationships with community members. That said, the biggest impact to the community will come from the Michigan legislature. Our job was to help the residents push for a community benefits package, give them options and updated information, and provide an outlet for their thoughts and ideas on how to improve their community. I believe we were successful in doing that.

**What impact do you think this experience will have on you in the long term?**

Urban planning is unique in the fact it requires knowledge in such an impressive variety of areas. We had to think about the interplay of many different factors. This class was an excellent real world exercise in systems-level thinking, a valued and required skill when solving today’s complex challenges.

Just as important were the personal relationships formed, with both my classmates and the residents of Delray. We also fell in love with the city of Detroit – it has so much to offer, especially for young people.

The Detroit Class was recently featured in an “Out of the Blue” Segment on the Big Ten Network. You can watch this video in the multi-media section of the Graham Institute website at www.graham.umich.edu.
Faced with increasing risks of intense storms, heat stress, clean water availability, and economic hardship, municipal leaders are seeking high-quality, location-specific analyses to help plan for climate change impacts.

That is the focus of a new $1.2 million research project the Graham Institute is leading at the University of Michigan (U-M) called the **Great Lakes Adaptation Assessment for Cities (GLAA-C)**.

Supported by the Kresge Foundation with $600,000 in matching funds, the three-year project seeks to strengthen the science and decision-making necessary for more effective urban climate adaptation in the Great Lakes region (in both Canada and U.S.). Researchers, staff, students, and stakeholders from across the region will collaborate to make this happen.

“While there is abundant research on climate change at national and global scales, there is a gap in regionally-focused adaptation planning for effectively addressing this pressing issue,” says Natural Resources and Environment Professor Arun Agrawal, co-principal investigator (PI) for the project. “The Great Lakes project is helping to fill this gap by providing the place-based information needed for developing and improving policy decisions and infrastructure investments.”

Professor Don Scavia, director of the Graham Institute and co-PI on the project, concurs.

“Every day, city administrators, land-use planners, mayors, and other key decision makers face questions about how to better prepare for, and deal with, the impacts of climate change in our region,” he says. “This project will generate datasets, tools, and a network of stakeholders that will be extremely useful for decision makers in private and government sectors.”

In addition to the information amassed by participating researchers, a significant amount of data will be harnessed from the **Great Lakes Integrated Sciences and Assessments Center (GLISA)** – a collaboration of U-M, Michigan State University (MSU), Ohio State University, and Michigan Sea Grant that is supported by the National Oceanic and Atmospheric Administration (NOAA) and housed in the Graham Institute.

“The purpose of GLISA is to connect researchers and decision makers around the issues of climate change and variability, so our work is a perfect fit for this project,” says MSU Professor and GLISA co-PI Thomas Dietz. “GLISA is helping to translate national research to regional levels, and the Great Lakes Cities project is synthesizing information down to practical, city-level applications. This work is bringing timely climate adaptation data to people who are making critical decisions about infrastructure and human health.”

As part of the project, GLAA-C researchers will work closely with urban leaders in five Great Lakes cities to build a network of decision makers and scientists invested in the sustainability of Great Lakes cities. One of the first cities confirmed to participate in the program is Grand Rapids, whose Mayor George Heartwell, attended an initial project-scoping meeting at U-M in October 2010.

“Grand Rapids is strong in climate mitigation, but we’re just beginning to understand the complexities of vulnerability assessment and adaptation planning,” he says. “I’m looking forward to engaging in this project to expand our knowledge-base and capabilities in this critical area.”

Other U-M faculty involved with the project include: Elisabeth Gerber; School of Public Policy; Larissa Larsen, Taubman College of Architecture and Urban Planning; Maria Lemos, School of Natural Resources and Environment (SNRE); Marie O’Neill, School of Public Health; and Ricky Rood, Atmospheric, Oceanic and Space Sciences. SNRE Postdoctoral Fellow Ahmad Safi is also working on the project.
Institute, University Housing, the OCS, the Student Sustainability Initiative (SSI), and the Voices of the Staff Environmental Stewardship Team.

“It’s not enough to establish a set of goals and say we are going to pursue them,” Prof. Scavia says. “To be truly successful, we need to create a culture of sustainable behavior on campus—and measure our progress.”

President Coleman concurs.

“To measure progress, the Graham Institute will be collaborating with the Institute for Social Research (ISR) to conduct longitudinal sustainability awareness and behavior surveys, develop cultural metrics, and track the level to which the campus community is understanding and living the principles of sustainability over time.

“The university really is transforming how it operates, both logistically and culturally, as a result of the Campus Sustainability IA,” Prof. Scavia says. “I’m very proud of the work we did to help bring academics and operations together for this complex and historical project. And I’m proud of the work we continue to do to use the campus as a living, learning laboratory for sustainability.”

A Full Campus Sustainability IA Report is available in the Integrated Assessment section of the Graham Institute website at www.graham.umich.edu.
“What Makes a Livable Community?”

What policies, interventions, innovations, and partnerships best enable urban areas to create more livable communities?

That’s the question the Graham Institute would like to answer through a new Integrated Assessment (IA) called: Advancing Livable Communities through Sustainable Transportation.

The IA will bring together researchers, stakeholders, and decision-makers to develop common analytical approaches, data sets, tools, and policies for relevant sustainable transportation and livable community interventions.

This holistic view incorporates a wide range of policies and strategies including sustainable transportation initiatives, land-use planning, economic development, communications and telecommunications, technology, environmental protection, health promotion, and more.

An effective IA in this context first requires identifying innovative efforts and partners willing to collaborate. To this end, the Graham Institute is currently reviewing planning grant submissions to pinpoint five projects to fund with $20,000 each.

According to IA Director John Callewaert, the planning grants will focus on the feasibility of conducting a place-based analysis of a particular set of interventions that will contribute to the IA. Planning grants will last for six months and run concurrently between November 30, 2011 and May 31, 2012. The Graham Institute will announce project selections at the end of November.