

Contact: John Nash

FY 2020 CAMPUS SUSTAINABILITY REPORT

Action Requested: Receive the report.

The universities have highlighted at least one project for each of the three STARS (Sustainability, Tracking, Assessment and Rating System) categories.

1. Academics and Research
2. Campus Operations
3. Planning, Administration and Engagement

Executive Summary: Iowa's public universities are committed to a sustainable future through academics and research, operations and economic development. Respect for the impact on the environment is part of decision-making at all levels. Regent institutions broadly apply campus sustainability in the general operations of each institution, in curriculum and in experiences of students and employees. Sustainability is also utilized effectively when partnering with industry and government, and in technology transfer.

Each university participates in the Association for Advancement of Sustainability in Higher Education (AASHE) Sustainability, Tracking, Assessment and Rating System (STARS) program, that is the universal standard for tracking sustainability in higher education.

Sustainability websites:

UI Office of Sustainability - <http://sustainability.uiowa.edu/>

ISU Office of Sustainability - <http://www.livegreen.iastate.edu/>

UNI Office of Sustainability - <http://www.uni.edu/sustainability>

Part 1 of 3
ACADEMICS AND RESEARCH

A primary function of colleges and universities is to educate students. By training and educating future leaders, scholars, workers and professionals, higher education institutions are uniquely positioned to prepare students to understand and address sustainability challenges. This STARS category recognizes institutions that have formal education programs and courses, as well as sustainability learning experiences outside the formal curriculum.

University of Iowa

Interdisciplinary, Scalable Solutions for a Sustainable Future (ISSSF)

The University of Iowa Office of the Provost has selected the inaugural recipients of the annual Provost Investment Fund (PIF). A call for proposals for the inaugural Provost's Investment Fund was circulated to deans and colleges in November 2018. It stipulated that successful proposals would measure success against Association of American Universities metrics or explicitly advance the university toward goals outlined in the UI Strategic Plan 2016–2021.

After receiving 23 proposals, the Council of Deans recommended five to Sue Curry, interim executive vice president and provost, who selected 5 proposals. Among the recipients was:

The *Interdisciplinary, Scalable Solutions for a Sustainable Future* (ISSSF) project. This is a three-year project, beginning in 2019.

It is expected that 2-3 seed grants will be funded each year. Project teams will draw from two or more departments, preferably from multiple colleges, and include research experiences for graduate and undergraduate students. In keeping with the living learning laboratory concept, direct engagement with off-campus public or private organizations is strongly encouraged.

The primary aims for this project are to:

- Promote Student Research. The research will have significant student participation at the undergraduate and graduate level.
- Promote the University of Iowa as an important destination for research and teaching in the environmental and sustainability sciences.
- Enhance the competitiveness of UI researchers as they compete for large interdisciplinary grants.
- Engage faculty and students from across campus as well as Iowa communities in meaningful, use-inspired research focused on sustainability and resilience.
- Sustainability science is a field of broad scope and investigators are welcome to address sustainability research from a wide variety of perspectives. However, this year it is difficult to ignore the catastrophic flooding that occurred in southwest Iowa. While not a requirement for funding, the review panel will be looking for high quality projects that address sustainability or resiliency issues related to the Iowa floods.

Awards typically cover one year. Funds may be used to support students, travel and to purchase supplies and equipment. Faculty salary support and travel to conferences/professional meetings are not allowed.

New Undergraduate Sustainability Major

An undergraduate sustainability major has been approved for the Department of Geographical and Sustainability Sciences. The proposed sustainability major will be interdisciplinary and focused on the complex connections that link humans to the biophysical systems on which we rely. It will be taught as a systems science, thus providing the pedagogical framework needed to understand complex interactions among system components. While the program will grow and evolve with the science and the profession of sustainability, it will consistently meet the growing demand for students trained to:

- 1) address the complex problems emerging from growing populations and increasingly stressed resources,
- 2) adapt and flourish in a rapidly changing world and
- 3) work toward a better tomorrow.

As a major public university in the 21st century, the University of Iowa must evolve to meet this demand. While traditional disciplines provide the footings on which academic institutions are built, bridging infrastructure is needed to tie disciplines, people and knowledge together in new and flexible ways; in this case, in ways that reflect the system connections that drive



sustainability science. Likewise, this proposed major will begin to build bridges between academia and on-the-ground systems management, an area of critical need if we are to implement sustainability in real-world settings.

Through this program, the University of Iowa seeks to cultivate students who are

forward thinking and able to envision a future with equity, high environmental quality and economic opportunity. Upon completion of the Sustainability Science major, students will be well equipped to be UI's ambassadors for the future.

These students must be able to work across the social, physical and mathematical disciplines, making the interdisciplinary sustainability science program challenging, but also important and rewarding. The program seeks motivated, high-achieving students who want to have a positive impact on science and humanity. This program will offer students relevant real-world experiences (e.g., study abroad, community outreach) as well as an academically rigorous curriculum. The program is designed to provide a solid foundation for sustainability related fields and, while not required, it is expected that many students will go on to graduate school and, perhaps, specialize in one of the fields of focus in this program.

University of Northern Iowa

Infusing sustainability within UNI curriculum

A long-standing goal at UNI is to infuse sustainability education across all disciplines. A number of recent curriculum contributions highlight UNI's progress towards infusion, especially through new teaching methods and into areas that may not be traditionally viewed as sustainability-related. For example, [Mitra Sadeghpour](#) has incorporated sustainability within the Opera Program through repurposing and retrofitting set and costume design. [Catherine Zeman](#) had her fall 2018 *Environmental Health Sciences* course conduct a mock trial based on the herbicide glyphosate. Students were assigned roles (e.g., attorneys, witnesses, plaintiffs, defendants, judges) at the beginning of the semester and prepared throughout the semester for a trial held during finals week.

Another department with notable progress in integrating sustainability within their curricular framework is Instructional Technology. Since spring 2018, [Leigh Zeitz](#) has been using the United Nations Sustainable Development Goals (SDGs) in his *Educational Technology and Design* course. This course is an introductory course for education majors that teaches future teachers how to



use technology to support learning. The course includes thematic units for which students must choose a general theme at the beginning of the semester. In spring 2018, Dr. Zeitz challenged his students to integrate the SDGs into their thematic units; many of the groups accepted his challenge and connected their projects to sustainability.

In fall 2018, Dr. Zeitz required all students in his *Education Technology and Design* course to



base their thematic units on at least one SDG. Dr. Zeitz found that the resulting projects had a more authentic basis than previous semesters because students were confronting real world problems. All of the other members of the instructional team for *Education Technology and Design* have since incorporated the SDGs into the course curriculum to varying degrees. As a result, the SDGs are now an integral part of a required education course which instructs 230 future teachers per semester.

Dr. Zeitz also incorporated the SDGs into *Using Digital and Social Media in Education*, an integral course for Educational Technology minors. In fall 2018, Dr. Zeitz had students collaborate with future teachers at the Red River College in Winnipeg,

Manitoba (Canada). Students were placed into inter-institutional groups (two students from each institution) and tasked to create educational lessons/projects based upon the SDGs. These projects provided the opportunity for the future teachers to compare what was being done in each of their cities/campuses and then create educational lessons/projects that could be used in schools and to document their findings. The projects included Sustainability Across Universities, Butts on Bikes, Save the Oceans, Sustaining the World - One Project at a Time, How's Your Health? and Creating Renewable Energy. Through these projects, students took their awareness of sustainability beyond the level of mere understanding to a point of mastery where they were prepared to teach about it.

Iowa State University
Creating Sustainable Spaces

Although many prisons partner with university horticulture departments on produce gardens or garden therapy, it is rare that universities have prison collaborations based in landscape architecture.

In 2010 the Iowa Department of Corrections approached the Landscape Architecture Department at Iowa State University with a request to create a planting plan for the new Iowa Correctional Institution for Women's (ICIW) campus. Through a studio class, offered by Julie Stevens, Assistant Professor of Landscape Architecture, ISU students, in partnership with Corrections staff, created a master plan that, over the past eight years, has



resulted not only in a planting plan but also multiple design-build projects, including outdoor classrooms, prairie, healing garden (for the special needs population), aspen grove, staff patio, food production garden, cut-flower garden, greenhouse and most recently a children's garden. These projects have collectively transformed the facility's barren 30 acres into a living landscape of trees, native prairie, vegetables, flowers, butterflies and bunnies.

In developing these spaces, students and faculty looked to healing/therapeutic hospital gardens and environmental psychology principles for vision and motivation, and engaged the women of ICIW in planning and completion.

For example in creating an aspen grove, consideration was given to offering refuge while still ensuring necessary surveillance. The space was designed to allow offenders to sit under a canopy of trees and still be visible to security officers, without feeling like they were on display. In addition, sitting specifically in a grove allowed additional opportunities to relax and focus, taking away some tension and relieving some stress.

In the case of a children's garden, focus was on a space that incarcerated mothers could bond with their children, an opportunity critical for the child's emotional and cognitive development and one of the most effective ways to end repeat and intergenerational cycles of incarceration. Security was also a priority for this outdoor visiting area due to interaction between incarcerated women and their guests. The plans needed to ensure prison staff could see everything at all times, while addressing challenges of an overcrowded space. The new children's garden offered not only more capacity, but also paved walkways, gardens, experiential play and positive distractions from the surrounding prison.



Everyone connected with the ISU-ICIW (Iowa Correctional Institution for Women) landscape project has been affected in some way. This includes the graduating students who talk at job interviews about implementing their designs on prison grounds, students who overcame their anxiety about working 'inside' with offenders and the offenders who take pride in their work and learning vocational skills and plan to study horticulture when released. Initial surveys of offenders show nearly a 75% appreciation and usage rating for the new landscape spaces created.

Through this collaboration with ICIW, Iowa State University joins only two other universities in the United States (University of Washington, Seattle; and University of California, Berkeley) in making this unique connection toward incorporating a systems approach to facility design – encompassing water management, ecology and social factors.

**Part 2 of 3
CAMPUS OPERATIONS**

This STARS category encompasses everything within the daily operation of a campus. It includes quantitative data reporting in the areas of Building Operations, Climate, Dining Services, Energy, Grounds, Purchasing, Transportation, Waste and Water Usage. This overarching category notes that institutions can design, build and maintain a campus in ways that provide a safe and healthy environment for the campus community. It recognizes the outstanding efforts to maintain a more sustainable campus environment.

University of Northern Iowa

Out of the Ashes, we will rise: A proactive approach to addressing the threats of Emerald Ash Borer



Sixty years ago the University of Northern Iowa campus began to deal with the Dutch Elm Disease. After a valiant effort lasting approximately 10 years the majestic American Elm fell. In the late 1960's and early 1970's ground staff were responsible for the removal of over four hundred American Elm trees from campus. To replace the harvested trees, many varieties of trees were planted, with the predominant being Ash, as an inexpensive and fast grower.

Emerald Ash Borer (EAB) was introduced to the United States from Asia in 2002. It is an exotic pest that infects ash trees, feeding below the bark causing tree death, as seen in this image from November, 2018. When UNI Facilities Management and Grounds staff learned of the EAB and its potential effects, a proactive plan was adopted. This plan included an urban forest renewal initiative to diversify the campus urban forest, the removal of campus ash trees in decline, and the preventative treatment of a portion of economically significant trees.



The first steps in addressing the ensuing arrival of EAB was a proactive process of planting an average of 110 diverse shade, understory and evergreen trees annually. This effort began in 2003 and was designed to limit a "scorched earth" look on campus. The second and final components have been to sacrifice some trees while simultaneously attempting to protect economically significant Ash trees from the EAB.

Based on the statewide reports on the progression of the EAB, UNI Grounds began treatment of select Ash trees, on central campus in 2015. By the following year EAB was confirmed to have infested Ash trees south of University Avenue. In the fall of 2018, targeted Ash trees in areas, south of University Avenue and west of Hudson Road were removed. Trees that were harvested were confirmed to be infested with EAB and have significant damage. In many cases the EAB larvae were noted upon peeling back the bark.

On the University of Northern Iowa campus, we have come full circle. Nearly six decades ago, Elms were lost and Ash were planted. Today we are losing Ash and are planting many varieties of trees. The species being planted are diverse and include new disease-resistant Elm cultivars. Today, Elm trees that were planted in 2003 are now large enough to be considered shade trees.

Continued monitoring and mitigation efforts will be in effect in future years as we work through this EAB infestation. With careful planning and a more diverse campus canopy, the University of Northern Iowa campus will be less susceptible to major impacts to the look and feel of our campus urban forest in the future.



Iowa State University *Prioritizing Reuse*

With a vision of serving as the premier living environment for advancing student success at Iowa State University, the Department of Residence is constantly considering space needs and waste challenges for the over 12,000 students that annually choose their home to be on-campus. Although standing partnerships are in place to offer landfill diversion options for residential waste, including collaborations with Goodwill that provided a reuse outlet for over 26 tons of unwanted furnishings during annual spring move-out, waste connected to renovation projects requires specialized focus and effort. In 2018 two housing renovation projects highlighted the dedicated commitment of Department of Residence staff in prioritizing large scale reuse.

First, due to the deteriorating condition of apartment patio fencing boards, 500 patio fences were replaced over a two-year period. Although 40-50 years old, these Cypress fence boards were



recognized as a beneficial, rather than non-beneficial, waste product of the renovation. Reuse options were explored and resulted in the creation of more than 100 "hallway benches" for university academic buildings, and the building and placement of 300 wood duck nesting boxes in partnership with The Delta Waterfowl Student Chapter at Iowa State. In addition to

placing nest boxes throughout Story County, the ISU chapter also shared boards with two other chapters in Iowa to assist them with their projects.

Most recently, fencing boards were reused to offer additional bird houses through a community art competition, bringing together partners including Ames Parks and Recreation, Ames elementary school art teachers, the Ames High School Art Club, Big Bluestem Audubon Society, Ames community preschools and area Girl Scout and Daisy troops. Judging of the birdhouses was completed in mid-April and birdhouse installation is scheduled to be completed in Ames' community parks by May 31.



Second, as part of a summer renovation project replacing residence hall furniture, ISU Department of Residence had over 187 tons of furniture for disposal. Staff researched options that had the capacity for over four thousand pieces of furniture within time and storage constraints to ensure all residential facilities would be ready for fall move in. An outlet was identified through The Reuse Network (IRN). Not only was IRN able to offer reuse outlets for all 4,038 pieces of surplus residential furniture, they were able to provide all transportation and relocation services – all at a cost lower than landfilling.

As a result of these efforts, containers of beds, desks, chairs, wardrobes, desktop bookcases and dressers were shipped to five states (Kentucky, Missouri, Tennessee, Texas and Virginia) and four countries (Jamaica, Jordan, Lebanon and Zambia) to aid with community relief efforts.

University of Iowa

Residence Hall Composting Pilot



The University of Iowa began composting food waste from two of its major dining halls in 2007. Since then, organics collection has expanded to five major dining facilities on campus and now diverts over 600,000 pounds of compostable materials from the landfill each year. While these efforts have been successful for large-scale operations, organic materials from small-scale generators continue to contribute to the landfill waste stream. On average, campus waste audits show that approximately 30% of the University's landfill-bound waste is compostable. Capturing all of the organics from these small-scale generators would allow the University to divert an additional 3.6 million pounds of waste from the landfill. However, collecting this material can be difficult, as

it is spread throughout all buildings on campus and relies on the generator (e.g., student, faculty, staff, visitors) to place it in the appropriate collection container. Composting facilities require near 100% pure organic material; very little contamination (non-compostable material) is permitted. To build a successful composting infrastructure for small-scale generators, the University must rely on the campus community to compost properly.

In the fall of 2018, the UI began the first phase of engaging the campus community in small-scale composting by launching the Residence Hall Compost Program. Any student living on campus now has the opportunity to collect organic materials in their room. As a student-led and student-supported program, funding for the collection buckets and educational materials utilized by the students was provided by UI Student Government. In the first year of implementation, students in 118 rooms voluntarily participated in the program. Through expansion of this program, students will continue to increase the amount of organics collected in their rooms, while becoming more prepared to contribute to successful compost collection in other buildings on campus.

Iowa Memorial Union Waste Diversion Pilot Project

The University of Iowa Office of Sustainability (the Office), conducted a waste audit of the Iowa Memorial Union as the first step in a pilot phase to establish a waste baseline for this location. The Iowa Memorial Union has been a focal point of campus life since its opening in 1923. Thousands of students, faculty and staff visit the IMU every day. It is often the place where the university makes its first impression on potential students, faculty and staff. At the IMU, students meet, study, join student organizations, attend events, concerts, lectures and more. It is home to various activities and organizations, such as Stanley Museum of Art, Human Resources, the Center for Student Involvement & Leadership and the Kendall Gallery.

As the IMU is highly trafficked by numerous campus stakeholders, the Office believes considerable tangible waste diversion progress can be made by achieving best



practices in waste diversion. The Office audited waste from the Hawkeye Room and River Room from February 18 through February 28, 2019. The waste was collected from lunch service only. Volunteers did separate audits for bags that came from the landfill receptacles, recycling receptacles and compost receptacles. Waste was sorted into five categories: landfill, recycling, non-"plastic" compostables (e.g., food and paper produces), compostable "plastics" (e.g., utensils) and liquids. There was an overwhelming amount of liquids left in containers. Results from this audit are included in the following tables:

Audit of Waste from the Iowa Memorial Union's Hawkeye Room
February 18, 2019 – February 29, 2019

Hawkeye Room	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM		Proportion	Solid Waste Prop.
	Landfill	Landfill	Landfill	Landfill	Landfill	Landfill	Landfill				
Landfill	1.4	2	3.8	4	1	1	1.8	15		28%	31%
Recycling	0.4	0.4	0.8	0.8	0	0	0.4	2.8		5%	6%
Organix (non plastic)	3.6	4.8	5.8	8.6	2	1.4	2.6	28.8		54%	59%
Organix Plastic	0.2	0.2	0.4	0.4	0.4	0	0.4	2		4%	4%
Liquid	0.4	0.4	1.6	0.6	0.2	1	1	5.2		10%	
Bag Weight	6	7.8	12.4	14.4	3.6	3.4	6.2	53.8			
Bag Weight No Liquid	5.6	7.4	10.8	13.8	3.4	2.4	5.2	48.6			
	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM		Proportion	Solid Waste Prop.
	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle				
Landfill	0.2	1.2	1.4	1.6	0.4	0.4	1	6.2		23%	30%
Recycling	0.4	1.4	2.2	2.2	0.6	0.7	2.2	9.7		36%	47%
Organix (non plastic)	0	1.2	0.8	0.8	0	0	0.6	3.4		13%	16%
Organix Plastic	0	0.2	0.2	0.2	0.2	0.2	0.4	1.4		5%	7%
Liquid	0.6	0.2	1.8	2	0	0.4	1.2	6.2		23%	
Bag Weight	1.2	4.2	6.4	6.8	1.2	1.7	5.4	26.9			
Bag Weight No Liquid	0.6	4	4.6	4.8	1.2	1.3	4.2	20.7			
	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM		Proportion	Solid Waste Prop.
	Compost	Compost	Compost	Compost	Compost	Compost	Compost				
Landfill	0.4	2	3.4	1.8	0	0.05	1	8.65		20%	22%
Recycling	0.4	0.2	0.4	0.6	0	0	0	1.6		4%	4%
Organix (non plastic)	1	5.4	8.6	7.4	1.2	0.4	3.6	27.6		63%	71%
Organix Plastic	0.2	0.2	0.4	0.2	0	0	0.2	1.2		3%	3%
Liquid	1	1.4	1.2	0.8	0	0.2	0.2	4.8		11%	
Bag Weight	3	9.2	14	10.8	1.2	0.65	5	43.85			
Bag Weight No Liquid	2	7.8	12.8	10	1.2	0.45	4.8	39.05			

Audit of Waste from the Iowa Memorial Union's River Room
February 18, 2019 – February 29, 2019

River Room	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM	Proportion	Solid Waste Prop.
	Landfill	Landfill	Landfill	Landfill	Landfill	Landfill	Landfill			
Landfill	3.2	4	3.6	3.8	3.2	3.6	3.6	25	26%	38%
Recycling	0	0.4	0.2	0.4	0.2	0.4	0.3	1.9	2%	3%
Organix (non plastic)	4.4	6.8	7	4.8	6	4.8	3	36.8	38%	56%
Organix Plastic	0.4	0.6	0.2	0.2	0	0.6	0.4	2.4	2%	4%
Liquid	3.6	3.4	4	4	2.6	5.4	7.6	30.6	32%	
Bag Weight	11.6	15.2	15	13.2	12	14.8	14.9	96.7		
Bag Weight No Liquid	8	11.8	11	9.2	9.4	9.4	7.3	66.1		
	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM	Proportion	Solid Waste Prop.
	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle	Recycle			
Landfill	1.4	3.2	3.4	1.8	1.2	1.4	3	15.4	25%	39%
Recycling	3	2.4	3.2	2.2	3.4	2	2.8	19	31%	48%
Organix (non plastic)	0.6	0.6	0.4	0.6	0.2	0.4	0.8	3.6	6%	9%
Organix Plastic	0.2	0	0.4	0.2	0.4	0	0.2	1.4	2%	4%
Liquid	4.4	3.1	3.6	0.6	2.2	4.4	4.4	22.7	37%	
								0		
Bag Weight	9.6	9.3	11	5.4	7.4	8.2	11.2	62.1		
Bag Weight No Liquid	5.2	6.2	7.4	4.8	5.2	3.8	6.8	39.4		
	1 (2/18)	2 (2/19)	3 (2/20)	4 (2/21)	5(2/25)	6 (2/27)	7 (2/28)	SUM	Proportion	Solid Waste Prop.
	Compost	Compost	Compost	Compost	Compost	Compost	Compost			
Landfill	1.8	2.4	3	2.2	2	1.4	3	15.8	18%	21%
Recycling	0.6	0.2	0.4	0	0	0.2	0.3	1.7	2%	2%
Organix (non plastic)	14.8	5	5.8	8.4	12.6	4.8	5.6	57	64%	75%
Organix Plastic	0.2	0.4	0.2	0.2	0	0.2	0.2	1.4	2%	2%
Liquid	1.8	1.9	2.4	2	0.4	0.6	4.2	13.3	15%	
	0									
Bag Weight	19.2	9.9	11.8	12.8	15	7.2	13.3	89.2		
Bag Weight No Liquid	17.4	8	9.4	10.8	14.6	6.6	9.1	75.9		

Aside from working towards less contamination in each of the five streams, the team also identified liquids as a priority area to address. This could be done via educational messaging throughout the IMU and/or trying a pilot program for liquid stream containers.

The Office plans to use this information to apply for funding from UI Student Government, combined with funding from the IMU, for new bins and signage. The bins, pictured left, will be purchased as step two of this pilot phase to reduce contamination levels. Post implementation waste audits will be conducted to analyze if there are any changes in contamination levels. With this information, the university will have data to establish how much waste could potentially be diverted over time. With this information, the Office plans to submit an application for a Solid Waste Alternatives Program (SWAP) grant through the Iowa Department of Natural Resources to expand this project beyond the pilot phase.

Educational components are currently underway to help decrease contamination and improve diversion, including student bin monitoring and Campus Activity Board (CAB) film advertisements. During Earth Month, the UI Environmental Coalition (UIEC) stations members near waste receptacles in the IMU to help students sort their waste properly. UIEC is also working on an ad that would be shown before every CAB film at the IMU, starting in Fall 2019. UIEC has also offered to do bin monitoring next year after the pilot bins have been tested.



**Part 3 of 3
PLANNING, ADMINISTRATION AND ENGAGEMENT**

This STARS category encompasses a wide variety of planning, engagement and outreach areas. It includes quantitative and qualitative data reporting in the areas of Coordination and Planning, Diversity and Affordability, Human Resources, Investment and Public Engagement. This overarching category notes that institutions of higher learning can make significant contributions to sustainability throughout society by sharing their experiences and expertise with others. Sharing best practices and lessons learned can help other institutions, communities and individuals realize efficiencies that they otherwise may not have considered.

Iowa State University
Sustaining Food Systems

Optimizing food production practices is critical for ensuring that farmers are profitable, food is plentiful and accessible and the environment is preserved. This is the vision of the recently announced Consortium for Innovation in Post-Harvest Loss and Food Waste Reduction, a collaborative effort of [Foundation for Food and Agriculture Research](#), [The Rockefeller Foundation](#) and Iowa State University.

Food loss and waste is a global problem that negatively impacts the bottom line of businesses and farmers, wastes limited resources and damages the environment.



Due to the volume of food that is moved globally, food loss and waste affects producers, manufacturers, distributors and end-users. More than 40% of fruits and vegetables in developing regions spoil before they can be consumed. This loss negatively impacts the bottom line for farmers, who are not compensated for their lost products. Additionally, producing food that is thrown out by consumers due to quality issues creates a significant drain on environmental resources.

The Consortium will build academic and entrepreneurial capacity of the next generation of agriculture by engaging researchers and students in multi-national, multi-disciplinary teams in the project identification, planning and execution phases together with professionals from the private and public sectors.

Building from The Rockefeller Foundation's [Yieldwise Initiative](#), the Consortium will focus on collaborative efforts to offer a scalable approach to link crop supply to market demand, allowing farmers to gain more value from their crops and become more profitable, while also stimulating local economic growth and improving the resiliency of rural communities.



The Foundation for Food and Agriculture Research is contributing \$2.78 million for this three-year project, which partner organizations from around the world are matching for a \$5.56 million project budget.

Participating institutions include The Rockefeller Foundation; Iowa State University; University of Maryland; Wageningen University and Research, Netherlands; Zamorano University, Honduras; University of São Paulo, Brazil; Stellenbosch University, South Africa; University of Nairobi, Kenya; Kwame Nkrumah University of Science and Technology, Ghana; and the Volcani Center, Israel.

University of Iowa

Environmental and Sustainability Career Forum

This spring, in conjunction with the Pomerantz Career Center, the Office of Sustainability and the Environment, Department of Geographical and Sustainability Sciences, Environmental Sciences program, Sustainability Certificate Program and Environmental Coalition hosted the first annual Environment and Sustainability Career Forum. The event offered current undergraduate students from across the University an opportunity to talk with alums and professionals working in environmental and sustainability careers to explore options and get advice on gaining experiences, finding an internship or job, or attending graduate school.



Twelve professionals from the Iowa City, Cedar Rapids Corridor attended the event which drew 135 students. Professionals were drawn from diverse backgrounds and career stages from both the public and private sector. This forum is part of a broader strategy spearheaded by the Office to connect students to internships, careers and professionals. While it is important that students receive good academic foundations that will prepare them for future careers it is also vitally important that students have professionalization opportunities available to help them make the transition to the working world.

A New Director and New Administrative Home for Sustainability Efforts

The College of Liberal Arts and Sciences (CLAS) has announced the appointment of a new director for the University of Iowa Office of Sustainability and the Environment.

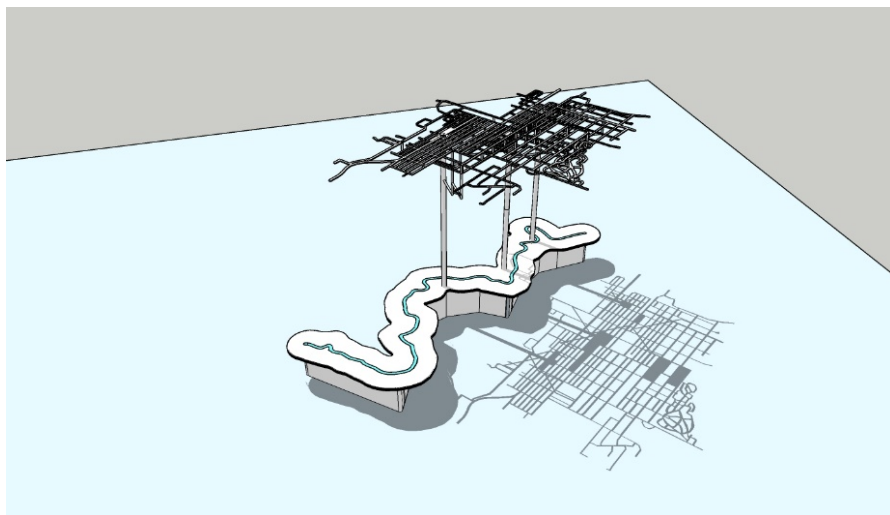
Stratis Giannakouros comes to the UI from Arizona State University, where he served as project manager and program manager for the Julie Ann Wrigley Global Institute of Sustainability. Prior to that, he was the assistant director at the Center for Sustainable Communities at Luther College and sustainability outreach coordinator at Colorado State University. Giannakouros has a bachelor's degree in Economics from Loras College and a master's degree in Environmental Politics and Policy from Colorado State University. He began his new position August 31, 2018 and will oversee the integration of the Office of Sustainability and the Environment (OSE) into CLAS.

The Office of Sustainability and the Environment has moved into the College of Liberal Arts and Sciences in order to focus on implementing new emphases on student research and learning opportunities. The office's move into CLAS, from the Office of the Provost and Facilities Management, will enable it to continue focusing on campus sustainability, while aligning it more closely with student-centered, sustainability-focused research and teaching in the college.

Iowa Initiative for Sustainable Communities: Wind and Art

This past year, four graduate students in the School of Urban & Regional Planning completed a Wind Farm Suitability Analysis for Linn County. Wind farms, while predominantly located in northwestern Iowa, may begin to expand to the eastern side of the state with advances in technology. While wind energy is a popular option for sustainable power, it also requires the placement of large wind turbines that are expensive and can be logistically challenging to site. This analysis identified current technologies and trends, as well as federal, state and local-level plans, and concluded that utility-scale wind farms are a viable option for Linn County. The analysis also included a spatial analysis of Linn County in order to determine ideal locations for potential windfarms, in keeping with environmental, land use and public opinion constraints. <https://www.thegazette.com/subject/news/government/report-wind-turbines-viable-in-linn-county-but-few-rural-residents-want-them-20190506>

Dan Miller, faculty member in Art & Art History, is leading a team of art students who will be fabricating a solar energy public art sculpture (pictured below) in downtown Webster City. This public art piece reflects the community's broader commitment to investing in solar-powered renewable energy in their commercial district, and contributes to creating a more culturally vibrant downtown area. This past year Professor Miller has worked to engage the community and develop preliminary designs for the solar sculpture, which will include lights and sounds that are powered



by solar energy through a connected solar panel. The design of the sculpture mirrors the Boone River that runs through Webster City and celebrates the importance of the river for the community.

University of Northern Iowa

Aldo Leopold Distinguished Lecture Series

The Aldo Leopold Distinguished Lecture Series (Leopold Lectures) was established in 2018 with the goal of engaging the University of Northern Iowa community. The series strives to provide opportunities throughout the academic year to interact with a dynamic set of visiting speakers focusing on our relationship with the natural world. These speakers come from many different perspectives and were chosen to engage new and non-traditional partners in campus sustainability efforts.

In its inaugural year, the Leopold Lectures planning group coordinated lectures, accompanying educational events and supplemental reading and materials for six distinguished speakers. Additionally, the full recordings of all lectures as well as supplemental educational materials have been collected and maintained through the [ScholarWorks](#) repository.

During the inaugural year of the Leopold Lectures, the following distinguished speakers have shared their stories at UNI.

- [Dr. Jennifer Lowry, MD](#) is a board certified physician and professor of pediatrics at the University of Missouri-Kansas City School of medicine. During her visit she discussed protections for children by creating healthy environments where children live, work and play.
- [Elizabeth Kolbert](#) is a Pulitzer Prize winner and author of *The Sixth Extinction*. Ms. Kolbert had two separate appearances, including a public discussion of her award winning works as well as a focused question and answer session geared toward students. Her visit resulted in nearly 1000 people attending her events on campus and radio and news reports of her visit reaching an audience of over 300.000 people.

- [Dr. Karen Oberhauser](#) is the Director of the University of Wisconsin-Madison Arboretum and a leading expert on monarch butterfly ecology. This speaker connected the entire local ecology community, both on campus and off through discussions of climate impacts to pollinations and the effects that are already being seen.
- [David Archambault II](#) (pictured right) is the former tribal chairman for the Standing Rock Sioux tribe. He was asked to come in for the first year Cornerstone Program. Mr. Archambault gave a detailed history of the conflicts at Standing Rock in 2016. His talks were attended by nearly 1000 UNI students and members of the community. The visit was also highlighted on a number of local media outlets.
- [Representative Robert Inglis \(R-SC\)](#) (pictured right, middle of back row) is a former member of the United States House of Representatives. He presented an argument of why climate change is such a pressing concern and the reasons that he feels the most appropriate way to address it is through free market economics. His talk drew a diverse audience of community members, specifically engaging those interested in business, policy and government.
- [Terry Tempest Williams](#) is an award winning author, who served as the keynote speaker for the North American Review's 50th year at UNI celebration. Her visit engaged the UNI community and also brought together over 300 writers from around the country.



Over the first year of the series, the Leopold lectures engaged thousands of people on campus and hundreds of thousands of community members throughout the Cedar Valley and beyond. The success of this series is a testament to the urgency and interest in sustainability and to the benefits of interdisciplinary and cross-campus collaboration.

The Leopold Lectures is a collaboration between UNI Sustainability office, Center for Energy & Environmental Education (CEEE), Department of Communication, UNI STEM, Rod Library, the North American Review and Sustainability Faculty Board. In addition to these internal partners, the series has received support from numerous on campus groups as well as the Roy J. Carver Charitable Trust.