

DYNAMIC SUSTAINABILITY LAB NOVEMBER NEWSLETTER

INTRODUCING SUSTAINABLE SYRACUSE

The multi-year Sustainable Syracuse Initiative launched in 2022 is through the generous donation of Syracuse University alumnus Kenneth Pontarelli ('92) and his wife Tracey who addition to funding the Pontarelli Professorship are supporting the development of students from across the campus to become the next generation of sustainability professionals.

Launched in 2022, the Sustainable Syracuse Initiative is a pan-university project that is bringing together students, faculty and staff from across the university working together to elevate Syracuse University as a recognized leader in environmental sustainability.

The initiative is focused on reducing campus wide energy & water usage, greenhouse gas emissions, minimizing wastes, reducing operating costs while importantly growing the culture of innovation and entrepreneurship around climate, energy and sustainability.

Dr. Jay Golden, who is the Pontarelli Professor of Environmental Sustainability and Finance in the Maxwell School and who directs the Dynamic Sustainability Lab stated that, "It is a very exciting to have the opportunity to work with our students, faculty colleagues and university leadership in developing a new generation of environmental sustainability strategies and solutions and to make our great university a beacon of innovation and creativity in this important field."

The Sustainable Syracuse project includes undergraduate and graduate students spanning academic disciplines from business, policy, engineering, physical and life sciences, communications and the arts working together in cross-disciplinary teams. "It is that spanning of academic disciplines coupled with the varied socio-economic backgrounds which makes this such an exciting and inclusive initiative," added Golden.

A recent study by Times Higher Education of prospective college students indicated they ranked a university's commitment and reputation for sustainability just after the rankings of the university- indicating the importance of this initiative.

Both the Syracuse Student Association and the Graduate Student Organization have teamed up with the Dynamic Sustainability Lab on the initiative.

PALM OIL TECHNICAL BULLETIN PUBLISHED



**CHILD LABOR IN THE
WORLD'S LARGEST PALM
EXPORTING COUNTRIES:
WHY CURRENT POLICIES
ARE INSUFFICIENT**

Researching the Risks and Opportunities of the Global Sustainability Transition

Bulletin No. 20220901

A team of graduate student researchers, Whitney Woerner, Shannon Erickson and Elena Taylor, have undertaken a deep dive into the child labor practices within the global palm industry and present a compelling and balanced analysis of collective actions that need to be taken to reverse these trends. While some organizations and activists call for a ban on the use of palm, this team discusses how this can potentially have even greater impacts to the people and communities we should be supporting through more effective policies and investments.

Visit <https://tinyurl.com/palmoilbulletin> to view the bulletin.

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OUR FIRST WASTE AUDIT

On Friday, October 27, our researchers spent the morning sorting, weighing, and evaluating ten bags of waste and three bags of recycling from the Schine Student Center on campus. The event was a collaboration between the Dynamic Sustainability Lab, Syracuse University's Student Association, and the Office of Sustainability Management. Split into teams with the task of separating the waste into plastic, paper, metal, organic compost, and non-recoverable trash, the Waste Audit Event thronged the DSL team, especially, and garnered valuable insight.

Olivia Happel, an undergraduate Circular Economy researcher within the Sustainability Syracuse team, organized and led the event, as her intent is to quantify the amount of potentially recyclable material entering our waste streams on campus.

"I feel so happy because I feel like this event is the catalyst of collaboration," said Happel after leading each team during the audit. "It's kind of proof that we can come together as different sustainability bodies and do something that produces really good, important numbers."



Each researcher, and even members of our Communications Team, suited up in protective gear and weighed the trash bags before sorting the waste into their respective categories. After the waste was sorted, it was weighed again to determine what types of materials enter our waste and recycling bins at Schine. Each team sorted three to four bags, and the general consensus was a lot of food and plastic ends up in our trash—especially unused plastic utensils.

Every single waste bag that was audited had materials that either could have been recycled or replaced with a sustainable alternative. Many volunteers commented on the large volume of unopened plastic utensils in the trash bags—students who eat at Panda Express and CoreLife are given a plastic spoon, fork, knife, and napkin packet that are often thrown away untouched. Additionally, there was an immense amount of food that could be collected and composted rather than dumped in the trash bags.

While the quantitative data measurements are still being evaluated, there is a general consensus that existing waste disposal signage and lack of signage deters students from properly recycling or disposing of waste. Our campus needs more educational signs that effectively communicate how, where, and why to dispose of waste because it remains unclear and confusing as to what can and cannot be recycled. This event was a tremendous start to reevaluating policies and quantifying recyclable material from waste streams on our campus.



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RESEARCH UPDATES - SUSTAINABLE SYRACUSE

Sustainable Syracuse | Circular Economy - Olivia Happel + Tanmay Rathod

The Circular Economy Team aims to investigate and quantify current solid waste management and material purchasing procedures at Syracuse University. By establishing baseline metrics for all waste streams on campus, Olivia Happel and Tanmay Rathod hope to provide the University with suggestions for purchasing sustainable, cost-effective alternatives.

Happel is focused on waste and recycling streams, while Tanmay is investigating the supply chain and university purchasing policies. The team has been continuously collaborating with Syracuse University Sustainability Management faculty to retrieve historical waste data. The team has also closely observed the types of waste receptacles on campus, noting how the signs on these receptacles communicate to students what should get thrown away where.

At the end of October, Happel ran a waste audit at the Schine Student Center. At the heart of campus, Schine is a place for eating, studying, and shopping, meaning that Schine inevitably produces a lot of waste. The waste audit allowed the Dynamic Sustainability Lab members to get an inside look at what gets thrown away and recycled at Schine. Preliminary findings suggest that a lack of educational signage in Schine is producing recycling bags that are highly contaminated with food waste. The team hopes that the findings from Happel's waste audit will trigger changes in waste receptacle signage in the Schine Student Center.

Sustainable Syracuse | Data Dashboard - Rahul Kotian

The Sustainable Syracuse Data Dashboard Team is responsible for developing the dashboard, obtaining the necessary data for the dashboard from the relevant teams, and visualizing it using Power BI. Recently, team member Rahul Kotian conducted a study on the technologies utilized by several colleges. He evaluated the finest available technology and considered the top two: Power BI and Tableau.

Kotian is working with the university's energy office to support the development of this dashboard which will serve as a blueprint, planning hub and guide for visitors locating certain pages. Power BI offers numerous visualization options. Kotian is experimenting with at least six distinct data visualizations to display the information in a variety of designs. Lab members will vote on the most aesthetically pleasing design. As a team, our goal is to make the best of the technology available and develop an amazing dashboard with the goal of quantifying the environmental impacts of the operation of the university.



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RESEARCH UPDATES

Sustainable Syracuse | Energy - Victoria Cawley + Tayara Romero

The Sustainable Syracuse Energy Team works to find the total energy consumption of the university, and more specifically in each individual building. Team members Victoria Cawley and Tayara Romero take a deep look into what sustainable efforts are made in various ACC colleges, as well as universities in the Northeastern region and find their success rates, costs, and how SU can implement similar efforts into the campus. Their main goal is to find the most sustainable and financially-feasible projects that can be implemented at Syracuse to reduce energy consumption, and finding where/how SU can start using renewable energy to power its buildings.

Cawley's research mainly focuses on building energy and looking at the STARS ratings on building and energy from other ACC universities, comparing their scores to Syracuse University's, and finding out what SU can do to become more sustainable in our academic, residential, student life, and athletic complexes.

To inquire about Sustainable Syracuse's energy research or other information, the team can be reached at vecawley@syr.edu & tromero@syr.edu.



Sustainable Syracuse | Transportation - Colby O'Hanley

As a society, we are rapidly transitioning to electric vehicles which brings with it complexities including the development of new infrastructure such as charging stations. Considerations need to be understood to ensure access to Syracuse University students, faculty, staff and visitors as well as in consideration with our community partners. Colby O'Hanley is working in partnership with various university, utility and community partners to examine the environmental, operational and economic considerations. In addition, Colby is working with peer universities across the country to garner new insights on the type of efforts they are undertaking and examining their applicability to Syracuse University. Finally, Colby is examining the various greenhouse gas emissions associated with each different scenario.

To inquire about Sustainable Syracuse's transportation research or other information, O' Hanley can be reached at crohanle@syr.edu.

