

SAR UCLA

2023-2024

WHAT IS SAR?

Sustainability Action Research (SAR) is a student-initiated, student-designed, and student-facilitated research program offered through the Institute of the Environment & Sustainability (IoES).

In the winter and spring quarters of each academic year, students on Sustainability Action Research Teams are partnered with a campus stakeholder to research, rethink, investigate, and tackle UCLA's greatest sustainability issues.

This is year we have 6 teams of undergraduate students from all majors working to put together a final deliverable for their respective projects.

PROGRAM DIRECTORS



Sam Trezona
Ecology, Behavior, & Evolution
3rd year
Program Director



Grace Salvestrin
Environmental Science
3rd year
Program Director



Melissa Morales
Geography/ Environmental Studies
4th year
Program Director

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Our teams collaborated to create this zine and encourage a more sustainable campus.

We hope you all enjoy reading what our SAR teams have been up to and encourage you all to continue supporting sustainability efforts on and off campus.

Follow us on instagram @sar UCLA and check out our website
<https://www.ioes.ucla.edu/sar/> for updates on our program including applications for next year!

Zero Waste Communications

Evaluating and Piloting Waste Sorting Signage in Ackerman Student Union

We are the first SAR team to work with ASUCLA to study how tri-stream waste bin signage can be used to make waste sorting into compost, recycling, and landfill a clearer and simpler process. Our goal is to prevent compostable and recyclable materials from ending up in landfills, and reduce contamination in recycling and compost bins.

Waste Audit and Improved Signage

We are performing visual waste audits in Ackerman and Court of Sciences before and after installing new waste-sorting signage. These signs were informed by a focus group conducted with members of UCLA's campus.

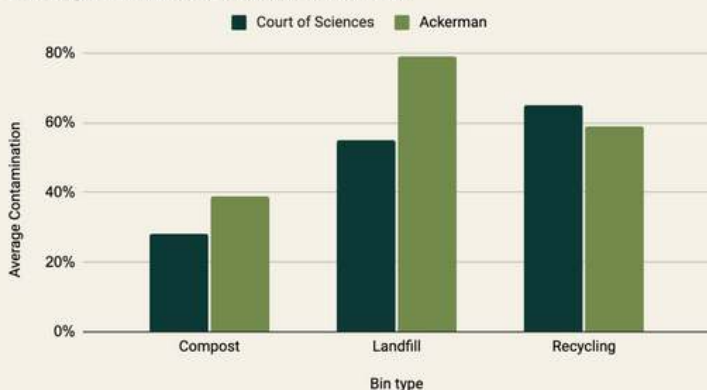


Survey

We will also post a QR code to a survey that will include questions on the usefulness of the signs and about general waste sorting concerns.

Preliminary Data

Average Contamination Across Bins



Top Contaminants

1. Napkins
2. Pizza Boxes
3. Soda Cups
4. Receipts
5. Paper Wrapper
6. Soiled Paper Bags

Scan the QR code so we can hear your opinions on waste sorting!



Impacts

Current signage at UCLA is cluttered and difficult to understand, resulting in poorly sorted waste. Our goals for this project include improving student knowledge on waste sorting, as well as improving the methods of communication that UCLA and ASUCLA use for this issue. We hope that by improving signage and making it clearer that waste can be diverted from landfills to meet UCLA's zero waste goals.



Team Leads

- Azura Haley, 4th year Political Science
- Gabrielle Biederman, 2nd year Geography/Environmental Studies

Meet the Team

- Maggie Chapin, 2nd year Environmental Science
- Sophie Crivier, 3rd year English
- Rhea Jain, 2nd year Environmental Science
- V Malian, 2nd Year Geography/Environmental Studies
- Anyisia Acosta, 2nd Year Environmental Science

Stakeholders

- Jade Goegebuer, Zero Waste Manager
- Jennifer Friedman, Communications Manager

PLASTIC POLICY INVESTIGATION

Our team is evaluating compliance with the UCLA Single-Use Plastics Policy at campus events. Our goal is to identify the most commonly used single-use plastics, determine compliance barriers that event organizers face, and create recommendations that will help make UCLA a plastic-free campus.



METHODOLOGY



◆ Informational Interviews

Interviews with faculty and students working in sustainability to gain insight on the Policy and its efficacy.

◆ Event Audits

Observing a random selection of events to record the presence of single-use plastics and alternatives.

◆ Event Organizer Survey

Surveying event organizers to gauge Policy awareness and prevalent compliance barriers.

INITIAL DATA

71%

of the events that we have audited so far have had at least one kind of single-use plastic product.



CONDIMENT CONTAINERS

are the most commonly observed single-use plastic products so far.



EVENT AUDITS



FUTURE IMPACTS

Enforcement of the Plastics Policy is currently limited due to the small size of the UCLA Sustainability team and vastness of the campus. We will recommend steps that the Sustainability Office can take to support event organizer compliance, track violations, and enforce the Policy at UCLA events.



Scan to learn more about the UCLA Single-Use Plastics Policy!



MEET THE TEAM

Stakeholder: Christophe LaBelle
UCLA Sustainability Analyst

Team Co-Leads: Rachel Minden,
Gianna Wright

Team Members: Fiorella Hunter,
Arushi Somani, Erika Patel,
Andres Elizarraras



UCLA Health Waste Pilot Program

Our research project aims to generate evidence-based solutions for **UCLA Health** to incorporate more **sustainable waste management practices**, while upholding principles of equity, diversity, and inclusion. To accomplish this, we are implementing and studying the effects of **a small-scale centralized waste system (CWS)** throughout the nonclinical spaces of Ronald Reagan UCLA Medical Center (RRUMC).



What is a Centralized Waste System (CWS)?

A waste bin that includes compost, recycle, and landfill streams



Meet the team

Leads:

Audrey Jason (3rd year) & Kate Ma (2)

Team:

Campbell Baker (2), Max Hause (3), Pam Nelson (3), Katelynn Situ (1), Tina Su (2)

Stakeholder: Noah Bidna

Sustainability Analyst for UCLA Health

Our Methods

- 1 Pre audits of waste 
- 2  Implement Bins
- 3 Interviews and behavioral surveys 
- 4  Post Audits of Waste

Preliminary Data

15-40%

of compost and recycling trash were mixed in the landfill bins that we conducted our pre-implementation audit on!



Our Impact

- Help UCLA Health reach its **sustainability goals** (Practice Greenhealth Award, divert 50% of waste from landfill)
- Gain behavioral data about the effects of CWS on **waste consciousness** amongst UCLA Health employees
- Identify how waste management practices related to the CWS will impact local **minority groups** and highlight ways that we can mitigate these effects.



 Sustainability Action Research



Reusable Container Study

our project

Our project studies the feasibility of implementing a reusable container program in UCLA takeout locations. We are focusing on analyzing the environmental and financial implications of implementing this program, as well as creating recommendations to provide to UCLA Housing for successful implementation.

methods

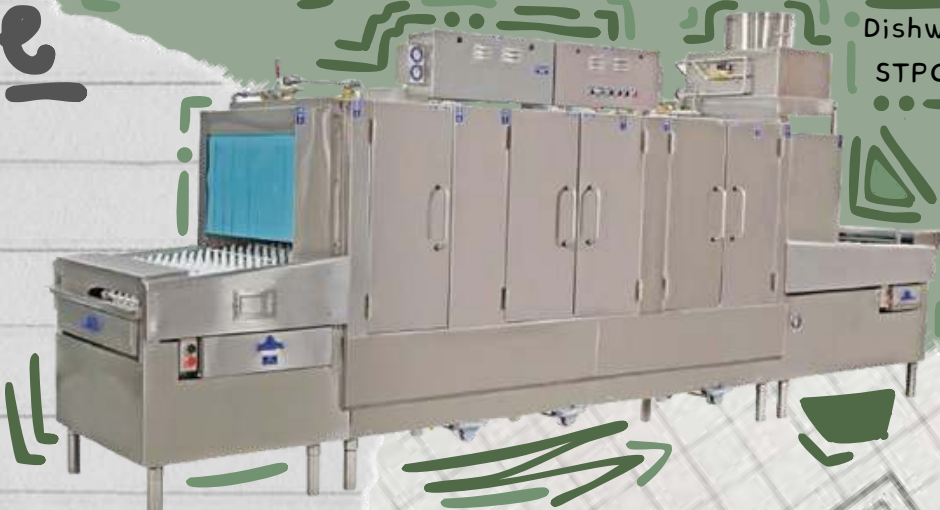
Through student surveys and interviews with dining experts, our team intends to secure insight into the logistics of a reusable implementation. Through analysis of in-house utility data and invoices, our team aims to calculate the environmental and financial costs of a Rendezvous pilot program.

water usage

Our team has conducted initial research to determine how much additional water would be needed to wash reusable containers

13,689 dishes/hr
58 gallons/hr

Dishwasher:
STPCW-ER



interview quotes

“Reuzzi is very scalable, user-driven, and self-sustaining.” -Dr. Schnitzer, REUZZI CEO

“Make the path of least resistance the most sustainable option” - Jon Webster, Boston University Sustainability Director

impacts

With the introduction of a reusable container program, UCLA has the potential to reduce its waste production, eliminating tons of waste each year from campus trash. In addition to the environmental benefits, UCLA dining would be able to save hundreds of thousands of dollars a year and be able to reallocate this money elsewhere.



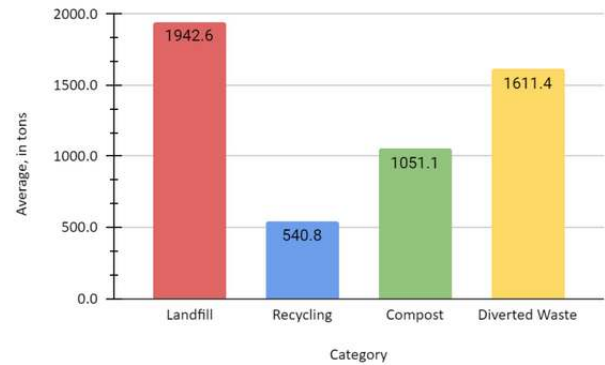
Survey

We want
YOUR input!

- Stakeholder: Brianna Moncada, UCLA Housing Sustainability Manager
- Team Leads: Devon Bradley, Cordelia Kuiper Rauch
- Team Members: Chloe Ng-Lee, Carina Marcelo, Ria Mehra, Erin Kitamoto, Angela Ke

preliminary¹¹ data

Amount of Waste Generated by On-Campus Housing, 21/22, 22/23 School Years



In total, On-Campus Housing produced an average of 3534.5 metric tons of waste per year. Not only that, but a total of \$268,772 was spent on 878,150 disposable container and lids at Rendezvous alone in 2022. On the other hand, the projected five year cost of the Reuzzi service for 20,000 containers is \$29,700.

Our team



Early Care & Education Gardening

We are developing the framework for a safe, accessible and sustainable garden at the UCLA Kreiger Center. This space is intended to be paired with a curriculum that teaches children about the importance of sustainability in an engaging way.

Methods

- 1 Reviewing current literature on sustainable gardening and environmental education
- 2 Conducting informational interviews with experts and Krieger Center community

Initial Results - Garden

Literature highlighted drip irrigation, lentils and tomatoes, and organic pest control as some sustainable options

Initial Results - Curriculum

Interviews with garden educators stressed increasing food knowledge, culture, outdoor learning, child interest and teacher guided principles



Impact

This is the first SAR project of its kind. It teaches the next generation the importance of a healthy planet. This has the potential to be a multi-year project, as we will only be producing a model and curriculum that can be built and implemented in a future SAR project.

Meet our team!

Stakeholder: Dr. Tashon McKeithan
Director of UCLA Early Care and Education

Ben Greider

Faith Shortridge

Joseph Serafino

*Team Lead

Yvette Lee

Grace Miller

Emma Carey

Mia James

*Team Lead

SOIL HEALTH & SUSTAINABLE LANDSCAPING

PROJECT DESCRIPTION

FOR OUR PROJECT, WE ARE UTILIZING RELEVANT LITERATURE AND EXPERT INTERVIEWS IN ORDER TO DEVELOP A SET OF ACTIONABLE RECOMMENDATIONS FOR HOW TO EFFECTIVELY AND RESPONSIBLY RESTORE THE SOIL ON UCLA'S CAMPUS. WE WILL THEN PRESENT OUR FINDINGS TO UCLA SUSTAINABILITY AND LANDSCAPE MANAGEMENT IN ORDER TO PROMOTE THE IMPLEMENTATION OF OUR PROPOSED PLAN.

METHOD SUMMARY

A – HORIZON (TOPSOIL)

METHOD 1: INTERVIEWS

AS OUR PRIMARY METHOD, WE ARE INTERVIEWING A VARIETY OF SOIL EXPERTS AT UCLA, THE GREATER LOS ANGELES AREA, AND OTHER CAMPUSES ON THEIR KNOWLEDGE OF SOIL HEALTH AND SUSTAINABLE LANDSCAPING AND WHAT SOIL TESTING AND RESTORATION PRACTICES THEY RECOMMEND FOR UCLA'S CAMPUS. WE ARE SYNTHESIZING THESE FINDINGS INTO RELEVANT RECOMMENDATIONS FOR UCLA'S CAMPUS ONTO ONE REPORT.

METHOD 2: LITERATURE REVIEW

WE ARE CONDUCTING ONE LITERATURE REVIEW OF RELEVANT ARTICLES AND PAST SAR PROJECTS ON THE SAME REPORT ABOVE. THIS WILL EXPAND ON OUR INTERVIEW FINDINGS AND ALLOW US TO MAKE MORE INFORMED AND NUANCED RECOMMENDATIONS IN OUR REPORT.

PRELIMINARY DATA – INTERVIEWS

B – HORIZON (SUBSOIL)

"THE BASIS FOR SOIL HEALTH IS SOIL TESTING AND SEEING WHERE THERE ARE NUTRIENT IMBALANCES"

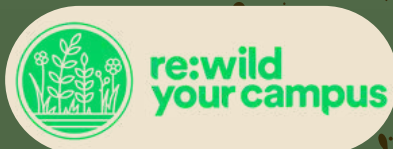
Sheina Crystal
Green Grounds
Program Leader

"YOU WANT FUNCTIONAL DIVERSITY, YOU WANT LOTS OF DIFFERENT THINGS BEING DONE IN THE SOIL... ALL THE DIFFERENT NUTRIENT CYCLES - NITROGEN, PHOSPHORUS, POTASSIUM, SULFUR MAGNESIUM, CALCIUM..."

Jordan Yanowitz
Community Ecology
Researcher

"ASSESSMENTS WILL ULTIMATELY CONTEXTUALIZE WHAT MANAGEMENT PRACTICES TO IMPLEMENT"

Joseph Amsili
Cornell Soil Health
Program Associate



C - HORIZON (PARENT MATERIAL)

OUR AIM IS TO CREATE A SET OF GUIDELINES AND RECOMMENDATIONS FOR UCLA FACILITIES MANAGEMENT THAT WILL IMPROVE SOIL HEALTH AND PROMOTE NATIVE BIODIVERSITY. WE HOPE TO UPDATE THE CURRENT UCLA LANDSCAPING PLAN BY ADDING SOIL TESTING AND SOIL MANAGEMENT PRACTICES TAILORED TO RESTORATION. WE HOPE TO ALSO INCREASE STUDENT AWARENESS AND ENGAGEMENT WITH RESTORED, NATIVE SPACES IN OUR URBAN CAMPUS SETTING.

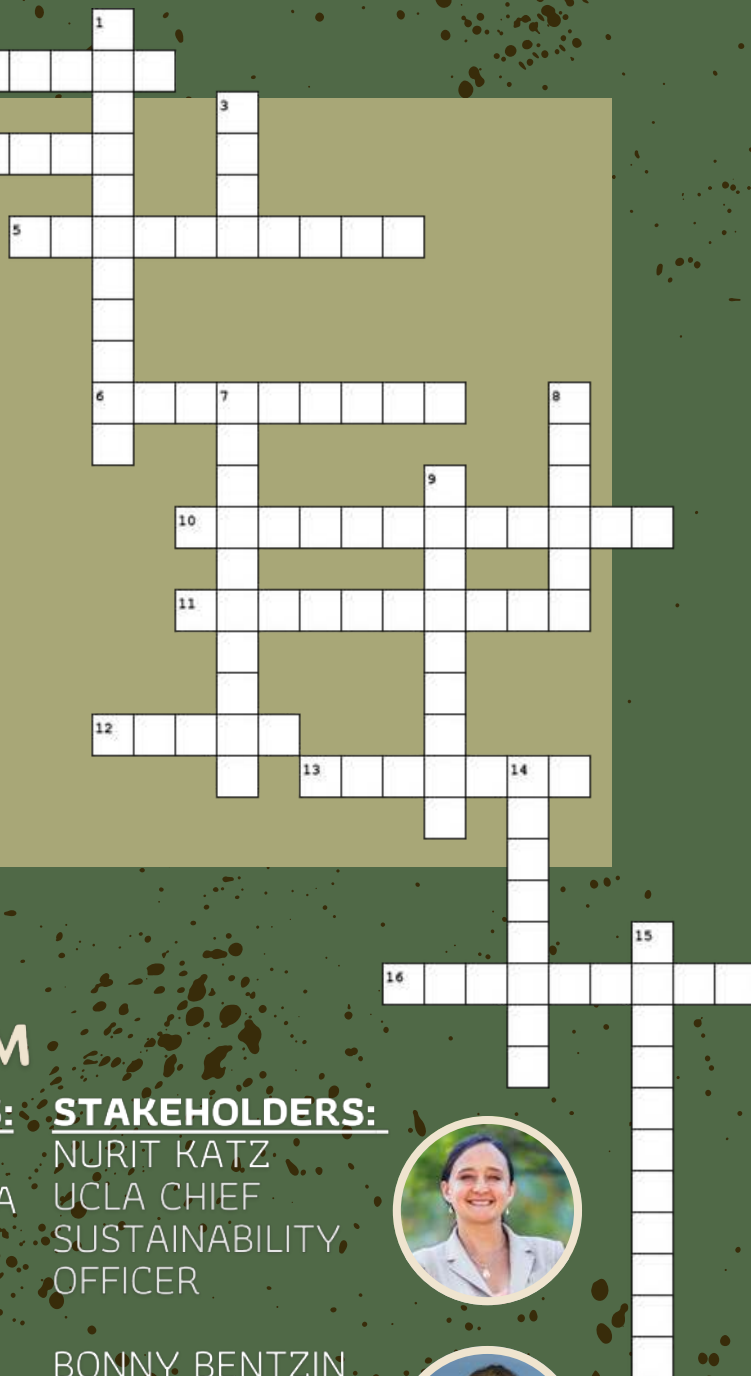
GET INVOLVED!

Across

2. An interconnected community of living organisms and their environment
4. Someone who studies soil
5. A natural substance that you mix in with soil to improve plant growth
6. The canopy of a forest or upper layer of vegetation
10. The variety of life forms within a given ecosystem
11. The community of microorganisms that live in soil
12. A protective (and sometimes smelly!) covering for soil, often made of organic material like leaves or bark
13. Organic matter turned into nutrient-rich soil fertilizer
16. Examples of this include pH, texture, moisture content, compaction, and nutrient levels

Down

1. Healthy soil relies on native plant _____
3. What our team is studying!
7. If a soil is able to easily recover from disturbances, it has high _____
8. These plants are indigenous to the land they're in
9. A landscaping technique that requires little or no irrigation
14. UCLA's primary native plants and wildlife habitat
15. A natural creek on UCLA's campus



MEET THE TEAM

TEAM MEMBERS:

SOFIA BROWN
MERCY SHRESTHA
SELENA YU
KYLA MARCELLO
SOLEIL BERKSON

TEAM LEADS:

JOY HUANG
JAMIE GRIFFITH

STAKEHOLDERS:

NURIT KATZ
UCLA CHIEF
SUSTAINABILITY
OFFICER

BONNY BENTZIN
UCLA DEPUTY
CHIEF
SUSTAINABILITY
OFFICER



Join SAR for

FINAL PRESENTATIONS



RSVP

MAY

30TH

Follow up with the SAR Teams and learn about their final deliverable!

Location

Fowler Lenart Auditorium

Join us from
5pm - 7:30pm