

# Environment and Sustainability

## Background

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The campus was launched during a period of deep social activism and engagement, which included the birth of the modern environmental movement. It is located on a site of profound natural beauty that hosts biodiversity hotspots on land and in the sea that were (and are) threatened by human development and exploitation. As such, it is no surprise that study of the environment, as well as the social, technological, and artistic dimensions of sustainability, pervade the curriculum, research, and operations of UCSC. Our campus mission statement is “UC Santa Cruz is a leading research university with a tradition of innovation in the education of students—built on values of social and environmental responsibility.”

Courses that touch on environmental topics are spread across the campus, including the College Eight core series (environmental science, policy, and technology), Earth and Planetary Sciences (climate, water, pollution, hazards), Ecology and Evolutionary Biology (ecology, evolution, and conservation), Electrical engineering (renewable energy, sustainability), Environmental Studies (agroecology, conservation biology, environmental policy and political economy), Microbiology and Environmental Toxicology (abiotic toxins, microbes, human health), and Ocean Sciences (climate, oceanography). Transformational courses, apprenticeships, and research opportunities are also available in non-degree sponsoring programs such as the Center for Agroecology & Sustainable Food Systems.

Operationally, the current campus sustainability vision states: “Building on UCSC’s longstanding commitment to environmental stewardship, the campus will successfully employ sustainability principles in all aspects of its operations. As UCSC pursues the UC mission of teaching, research, and public service, the campus will also serve as a model and a leader in advancing global sustainability.” Sustainability is “governed” by State regulation, UCOP policy and guided by the Campus Sustainability Plan, which includes nine topic areas and each topic area has a corresponding working group:

- Awareness Education and Engagement,
- Building and Facilities,
- Food,
- Procurement,
- Waste,
- Water,

- Land Habitat and Watershed,
- Transportation,
- Energy and Greenhouse Gas.

## National Trends

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The Association for the Advancement of Sustainability in higher Education (AASHE) tracks trends in the field of sustainability in higher education. Their most recent analysis from 2012 notes the continued “advancement of sustainability education across the curriculum” and the “transformation of campuses into living laboratories for sustainability”, and it indicates the following three trends:

- New developments - Sustainable investment, affordability & access, and global sustainability initiatives have arisen as key areas of focus;
- Changing dynamics - The sustainability movement is constantly evolving, particularly in the areas of curriculum, research, funding, and staffing;
- Areas of prevalence - Energy, buildings, measurable outcomes, and more.

Operationally, UCSC is ahead of the national trends in areas such as food and dining, however there are significant opportunities in areas such as energy and buildings, global sustainability initiatives, and human resources.

## Strategic Themes and Opportunities

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### Stewardship

Our campus offers a living, learning and working environment that is amazingly beautiful. The natural environment, from the redwood forest, to the meadows, to the Coastal Science Campus, is a major asset for our campus. It offers a wealth of eco-system services -clean air, animal habitats, and a variety of recreational activities - which contribute to stress reduction and community-building, as well as improved emotional and mental health. It also helps with recruiting and retention of faculty, staff, and students. Respect for our shared natural environment is an integral part of our campus ethos.

### Operations

Currently the division overseeing and advising campus sustainability related to operations is Business and Administrative Services (BAS), primarily through the Sustainability Office with consultation and implementation by Physical Plant, Physical

Planning and Construction, and Colleges, Housing and Education Services. Operational sustainability efforts offer a wide range of experiential learning opportunities and leadership development opportunities for students. Experiential learning provides opportunities for students to apply classroom lessons to real-life situations. Examples of experiential learning opportunities include the Provost's Sustainability Internship (PSI) program, Education for Sustainable Living (ESLP) and the Chancellor's Undergraduate Internship Program (CUIP).

Sustainability has been an area where staff, faculty and students from different offices, divisions, majors, etc. can come together to discuss and share opportunities for improving the environmental performance and sustainability of UCSC. There are often additional benefits that stem from sustainability initiatives in campus operations, including increased efficiency, communication, creativity, and unique student learning opportunities. However, sustainability does not integrate into everyone's daily practices. This may be a result of individual behavior choices and/or policies, procedures or directives that are themselves un-supportive of sustainability.

### [Connections Between Academics and Operations](#)

The academic and research mission is currently disconnected from efforts to make our campus more operationally sustainable. There are tremendous opportunities to harness the "Think global, act local" ethos that fuels our campus's sustainability efforts and to better integrate with faculty and student research and on teaching inside and outside the classroom. Our campus could be well positioned to succeed in connecting the operational and academic aspects of sustainability. However there are significant challenges that hinder process, including communication, academic structures and other operational priorities. While some programs exist, including PSI and Sustainable Engineering and Ecological Design (SEED), there is still an opportunity to build stronger connections and to improve the ability for research projects to be implemented as pilot programs and test projects. This will require a campus strategy. UCSC should take full advantage of the megaphone provided by having an impact within California, a state that is a global trendsetter in environmental action.

### [Academic Structures](#)

There are a considerable number of disparate academic and research efforts on the environment and sustainability at UCSC. How can we best promote collaboration and further growth of our curricular and research efforts? An undergraduate major in environmental science is under consideration, as is a masters program in coastal policy. These programs are rooted in our existing world-class research and faculty, as should be any future programs. Should additional areas be considered, such as agroecology, urban planning and sustainability, and smart energy? The campus has previously contemplated a School of the Environment to further organize these types

of efforts. Would a School be helpful now? Given the political hurdles associated with launching a major organization such as a School, progress will only occur if the senior campus leadership stimulates and supports the conversation, as they did with the launch of the Baskin School of Engineering. A School of the Environment could improve the visibility of our research, our faculty, our academic programs, and our sustainability achievements. Short of establishment of a new School, we could also consider structures such as joint admissions policies (like the Program in Biomedical Science and Engineering) or graduate groups.

### Communications

While we have much academic and operational activity, and many natural resources on campus, we may not be doing as well as we could in communicating the opportunities and successes, both internally and externally. Not doing so is an incredible missed opportunity, as our local, national, and international profiles may not fully reflect our areas of excellence and great achievements. Better communication could increase cross-departmental collaboration, both for academic departments and for operational departments. Promoting better awareness of the resources on campus (e.g., North campus, Arboretum) to the campus community of faculty, staff, and students, as well as to the city of Santa Cruz and the surrounding population could increase our stewardship efforts. The Coastal Science Campus and the Hay Barn could serve as public-facing parts of campus to build bridges with the community and the public. We could better leverage our campus reputation of environmentalism to improve community relations, as well as to attract future students, staff, and faculty. With the current campus efforts in internationalization, sustainability accomplishments and/or possible partnerships could be used to increase our international profile. We could leverage the fact that alumni value their environmental/sustainability-related experience on campus in improving our alumni relations.

Communication is also important at the intersection of other campus themes, such as social justice and diversity. Ideally these efforts are mutually reinforcing, rather than in competition.

## Short Term Plans

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- Develop new academic programs in the environment and sustainability in a coordinated manner.
- Establish academic leadership for this constellation of research areas that relate to the environment and sustainability.
- Build stronger connections between academics and operations through improved communications, information sharing and collaborative work on the challenges that connect the two aspects of our campus.
- Build the environment and sustainability into the Transformative Student Experience, such as creating and further supporting hands-on opportunities in living-learning labs.
  - Streamline the approvals processes that need to be navigated for implementing student and faculty projects.
- Continue to improve operational sustainability,
  - Improve data collection, accuracy and reporting to external agencies and to on-campus users. (e.g., energy, water usage).

## Long Term Plans

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- Consider alternative academic structures that provide innovative approaches for collaboration or that better integrate pieces into a larger whole.
- Build stronger connections between the campus and the broader community around the environment and sustainability.
- Modify institutional policies and funding structures to facilitate progress on campus operational sustainability.
- Communicate to internal and external audiences the sustainability accomplishments of our campus and the natural resources it provides.