



# S<sup>3</sup>: Sequestering Carbon From the Sierra to the Sea

## **UC Davis Institute of the Environment**

# The Challenges

Extreme temperatures, drought, pollution, wildfires and crop losses. We know that higher levels of greenhouse gas emissions are exacerbating these adverse consequences—and impacting all our lives.

The challenges of the climate crisis are accelerating, and together, we must bring forth solutions to secure our planet's future.



## **A Scalable Solution**

We know that seagrass meadows and kelp forests have the potential to capture carbon in coastal regions, thus reducing the amount of carbon transported to the oceans. Adding farmed kelp to soils is also highly effective at sequestering carbon dioxide and reducing methane emissions from livestock—the leading agricultural source of greenhouse gases worldwide.

UC Davis is uniquely positioned as a global leader in environmental studies, agriculture, engineering, health sciences and more. Leveraging our interdisciplinary expertise, the Institute of the Environment is conducting a largest-of-its-kind carbon sequestration research project—the S³ initiative—using recycled organic waste products, minerals and kelp to efficiently store carbon in both natural and farmed settings.

By sharing research results with industry leaders, farmers, policymakers and the public, we can take actionable steps to mitigate the effects of climate change. Successfully scaling this research can translate to outcomes like lower greenhouse gasses, more sustainable farmlands, healthier communities, increased food security, stronger economies and more. The ability to store more carbon in the soil or in the seas—and less in the atmosphere—will help steer the trajectory of climate change.

Philanthropic support is key to developing new technologies and scaling S<sup>3</sup> to translate discoveries into global solutions.

### **UC Davis Institute of the Environment**

## **Greater Together**

Large-scale challenges require largescale solutions that combine collaboration at both local and global levels. S<sup>3</sup> partners with farmers, Indigenous communities, ranchers, Native American conservancy organizations, startups and small business owners to do just that.

Honoring the knowledge that Indigenous communities have refined for centuries, we are partnering with these experts to address the preservation of coastal ancestral waters and stewardship of coastal lands. Farming kelp as a food source, as well as a soil amendment, builds a regenerative economy for local communities. The Institute of the Environment is proud to cultivate relationships with other experts in the field of climate change solutions working toward a common goal—protecting our natural resources for future generations.

In partnership with innovative leaders, S<sup>3</sup> will develop sustainable, nature-based solutions to climate change impacts.

#### **An Invitation**

As we look toward the future of climate change solutions, we invite visionary philanthropists to strengthen our capacity for impact. Support for innovative research and student fellowships that train future leaders will play a key role in elevating S<sup>3</sup> to new heights.



"Kelp farming represents the interconnectedness of a healthy ecosystem—it represents food sovereignty, climate resilience, a regenerative economy and connection to our Native culture and traditions. Collaborating with the Institute will also advance responsible stewardship of our natural resources, which is critical to the long-term health of our planet."

- Dune Lankard Founder and President, Native Conservancy



To learn more about supporting the Institute of the Environment, please contact:

Allison Chilcott Managing Executive Director of Development, Office of Research acchilcott@ucdavis.edu or (530) 979-1439 argreen@ucdavis.edu or (530) 754-0763

Ashley Green Director of Development, Strategic Initiatives