EXECUTIVE SUMMARY

OneClimate is an initiative dedicated to creating a sustainable, just and habitable world and the pathways to get there.

Why does this matter?
For humanity to flourish in the 21st century we need to rapidly remove greenhouse gas pollutants from the atmosphere, create a vibrant and climate-smart workforce, and generate sustainable ways of thinking and behaving – all the while adapting to the manifold impacts that have already been set in motion.

Tackling these formidable challenges will require the energy, intellect, and creativity of engaged citizens. OneClimate will model this type of effort through its multi-disciplinary, campus-wide initiative. Over the past year we have diligently worked to build coalitions across UC Davis. OneClimate will serve the university, faculty, students, and administrators, but its impact will not stop at the edge of campus. We envision OneClimate as a way to engage and collaborate with industry, government, NGO’s, foundations and communities to create a habitable, just world.

We developed this proposal in an open and transparent manner with input from a cross-campus Steering Committee as well as the public through two events held earlier this year. Our efforts to date have provided a strong foundation for action, allowing us to identify key areas of research and refine the purpose, objectives and principles of OneClimate. We also acknowledge that diverse partnerships and points of view are key to addressing the challenges that lie ahead. With this in mind, we have developed a multi-pronged strategy for engagement that provides a platform for all participants—from disadvantaged communities and Indigenous Peoples, to social scientists and economists—to contribute to the success of this initiative.

The design principles
To focus our work on achieving transformational and meaningful impact, we’ve created a set of design principles to guide our efforts. We created these principles in conjunction with over 100 faculty, students and staff and serve as the building blocks of the initiative. They encode the spirit and values that have been stated as vital to all of our stakeholders. The design principles are:

- Engage in rigorous research
- Make real impacts
- Take a holistic approach
- Work across boundaries
- Create transformative, disruptive and non-linear change
- Educate the next generation of global innovators

We believe the best strategy is represented through action. Over the last year we’ve partnered with the Exploratorium museum in San Francisco and over 29 different centers and institutes across all colleges and professional schools at UC Davis who are dedicated to combating climate change. We’ve connected with industry, government and other project partners and hosted workshops that have recast expectations for partnering in the university setting.

With the confidence and buy-in that we’ve gained over the last year, we’re ready to develop a more robust presence on campus and in the world. We’re creating plans for project support, space, organizational structure and dynamic partnerships. And we’ve got exciting things ahead. In the next 5 years we plan to go from a small initiative that is grounded in solid thinking to a model for new ways of thinking about, and tackling, the world’s most complex and pressing challenges.

About this document
This document has a much different format than most 5-year strategies. At OneClimate, we believe that we need to think differently about our challenges to make the bold impact that is necessary for worldwide prosperity. This document reflects the cross-disciplinary, campus-wide collaboration that has been happening for more than the past year. Faculty members and students from environmental justice to transportation studies, human ecology and design have contributed to this work.
ONECLIMATE TEAM

Initiative Leadership

**Benjamin Houlton**, Chair OneClimate  
Professor and Chancellor’s Fellow, Land, Air and Water Resources, Director, UC Davis John Muir Institute of the Environment

**Tom Maiorana**, OneClimate Architect  
Assistant Professor, Design, Fellow, John Muir Institute for the Environment

Committee Members

**Ana Lucia Cordova-Kreylos**, Strategic Initiatives Manager, Office of Research  
**Paul Dodd**, Associate Vice Chancellor for Interdisciplinary Research and Strategic Initiatives  
**Woutrina Smith**, Associate Professor of Infectious Disease Epidemiology, School of Veterinary Medicine  
**Ben Finkelor**, Executive Director, UC Davis Energy Efficiency Center  
**Richard Frank**, Professor, Environmental Practice (Law); Director, CA Environmental Law and Policy Center  
**Rebecca Hernandez**, Assistant Professor, Land, Air & Water Resources  
**Tessa Hill**, Professor & Chancellor’s Fellow, Earth and Planetary Sciences/Bodega Marine Lab  
**Shaun Keister**, Vice Chancellor for Development and Alumni Relations  
**Kat Kerlin**, Environmental Science Writer, Strategic Communications  
**Jonathan London**, Associate Professor, Human Ecology; Director, Center for Regional Change  
**Beth-Rose Middleton**, Associate Professor, Native American Studies  
**Isabel Montanez**, Professor, Earth and Planetary Sciences  
**Eric Post, Professor**, Wildlife & Fisheries Biology  
**Paul Prokop**, Associate Vice Chancellor, School & Unit Programs, Development Office  
**Marc Schenker**, Distinguished Professor, Public Health Science & Medicine; Director, Center for Occupational & Environment Health/Western Center for Agricultural Health & Safety/Migration & Health Research Center  
**Dan Sperling**, Professor, Civil Engineering; Director, Institute of Transportation Studies/Energy Institute  
**Jay Stachowicz**, Professor & Chair, Evolution & Ecology; Director, Center for Population Biology  
**Anne Todgham**, Associate Professor, Department of Animal Science  
**Dana Topousis**, Interim Lead and Executive Director of News & Media Relations, Strategy Communications  
**Paul Ullrich**, Associate Professor, Land, Air & Water Resources  
**Susan Ustin**, Professor, Land, Air & Water Resources  
**Anthony Wexler**, Distinguished Professor, Mechanical & Aeronautical Engineering/Civil & Environmental Engineering/LAWR; Director, Air Quality Research Center
ONECLIMATE BACKGROUND

The phrase “global warming” drums up all sorts of thoughts and feelings in our small and rapidly shrinking world. To some, it's the unraveling of humanity – the end of planet Earth as we know it. To others, climate change is a simple fact of life, something that has always and will continue to happen, no matter the cause or condition. And still others consider global warming through the lens of winners and losers, the “haves” and the “have nots,” banking on technology and innovation to once again save the day...just to name a few perspectives.

But regardless of the many differing ideas, one thing is clear: Global warming, or more accurately global climate change, is arguably the single most defining issue of the 21st century. How we collectively react to climate change will determine the fate of humanity and chart the course of modern history for many decades to come.

At UC Davis, we believe that we can work harmoniously with differing viewpoints to solve the challenges of global climate change and reinvent the world in which we live - giving rise to a 21st century economy and new jobs across sectors of society. We are optimistic about the power of collaboration and cooperation in finding innovative solutions to a rapidly changing climate and planet. We are prepared to make a positive impact on society and focus on solutions rather than miring ourselves in the problems.

We are calling this unique UC Davis approach “OneClimate” – recognizing we are all in this together, regardless of discipline, status, color or creed. To us, global climate change is a “threat multiplier,” meaning that it presents risks to just about everything we care about. We must be open, creative, agile, non-linear (dynamic), and transformative to make a real-world impact.

OneClimate moves beyond the politics and dialogue of global climate change by leveraging our own unique blend of cross-disciplinary problem-solving. Global climate change is an opportunity to think bigger and bolder – smashing the ivory tower mystique that has held back academia – and merge disciplines to create entirely new ways of thinking about the world, for the world.

Curious to learn more? Please join us. We can create a whole new world by working together – OneClimate for everyone and everything.
WHY IT MATTERS
If humanity is going to thrive on this planet, we must remove greenhouse gases from the air and create new ways to think about sustainability – all the while adapting to the impacts of climate change that have already been set in motion. We cannot afford to leave any of these challenges unaddressed. Changing how we behave is a multi-generational challenge, but one that is essential for long-term prosperity.

We cannot keep the climate below 2 degrees C of warming with incremental changes. Removing greenhouse gases is an urgent need and critical to slow the consequences of global climate change that are already underway. And while these daunting challenges are quite real, we need to plan to address them within the context of a dynamic system in motion. The effects of climate change will continue to introduce uncertainties into all human and natural systems. We must rise above our differences to create a new worldview.
WHO IT’S FOR
This initiative relies on a variety of diverse stakeholders who have unique contributions to offer and benefits to receive. Specifically, we aim to catalyze UC Davis experts (faculty and staff) and our entrepreneurial student population. By focusing on these key groups, we’ll be able to meet the needs of external partners in industry, government, NGOs and local to global communities. OneClimate is an inclusive initiative that draws strength from the variety of perspectives and voices who can provide insight on the opportunity to put climate research and solutions into action.
DYNAMICS FOR A SUSTAINABLE INNOVATION ECOSYSTEM

A sustainable, healthy ecosystem maintains functions and requires reciprocal interactions to flourish. For us at OneClimate, this means that contributors must experience as much give as get. That’s the experience that helps them to continue to show up, contribute their best work and continue to build momentum. The initiative must be designed to ensure that all contributors come out ahead by expanding the scope of their community, working across disciplinary boundaries and radically growing creativity.

<table>
<thead>
<tr>
<th>Contributor</th>
<th>Gives</th>
<th>Gets</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC Davis Experts</td>
<td>Time, intellectual effort, creativity, openness</td>
<td>Ability to connect to more diverse pools of funding. Ability to have research make greater impact (policy, industry, etc.) Enhance research through creative collaborations.</td>
</tr>
<tr>
<td>UC Davis Students</td>
<td>Intellectual effort, passion, energy</td>
<td>Experience working across disciplines, a key skill for 21st century impact work. Ability to work on world changing project at scale. Connections to industry experts.</td>
</tr>
<tr>
<td>External Academic Partners</td>
<td>Expertise, intellectual effort</td>
<td>Ability to leverage benefits of UC Davis climate expertise and connections to climate science.</td>
</tr>
<tr>
<td>Partners (Industry)</td>
<td>Support with scale, time, energy</td>
<td>Inside connection to cutting edge research. Access to thought leaders in climate science. Prestige associated with tier 1 research institution. Connections to students (potential workforce.)</td>
</tr>
<tr>
<td>Partners (Government)</td>
<td>Time, energy, connections to policy</td>
<td>Rigorous research to support policy decisions. Full range of innovative thinking and ideas that aren’t possible in confines of Government. Exciting ways of seeing the future.</td>
</tr>
<tr>
<td>Partners (Community)</td>
<td>Time, attention, feedback, trust (letting academics work in their communities)</td>
<td>Ability to have a voice in their community’s future. Connections to Tier 1 Research University. Ability to influence policy and have a greater voice.</td>
</tr>
</tbody>
</table>

Framework partially derived from Designing Your Zag, Marty Neumeier
THE PRIMARY AUDIENCES
Even the most inclusive initiatives must make choices about where to prioritize efforts and resources. We have selected two primary audiences, UC Davis experts and students, based on the fact that they provide the necessary components of OneClimate. Fortunately, this is not a zero-sum game. By focusing on the needs of these core constituents, we are confident that we’ll be able to address the needs of the full range of initiative stakeholders.

UC DAVIS EXPERTS
Research and communication will be the driving forces behind the path-breaking efforts of OneClimate. Rigorous research will help guide our planet towards the solutions that will truly make an impact on everything from behavioral changes to biological and technological breakthroughs.

What do they get from this initiative?
UC Davis is recognized as a research powerhouse based on its distinctive, collaboration-based culture. By reconfiguring our vast resources we will unleash a powerful synergy that will lead to meaningful results at scale. OneClimate serves as a way to bridge disciplinary chasms (both internal and external) so that the best research can flourish and grow through financial support, intellectual collaborations and connections to the world at large.

UC DAVIS STUDENTS
Students are a critical aspect to any endeavor at UC Davis. The energy, enthusiasm and willingness to bring new ways of thinking to old problems will make them indispensable parts of this initiative. And because students will carry on this multi-generational project, their commitment to this initiative is essential.

What do they get from this initiative?
By participating in OneClimate, students can harness their energy and efforts to immediately connect to a problem that is worth solving. In addition, the connections between OneClimate and the world beyond academia mean that students are able to gain valuable experience tackling some of the world’s most pressing challenges in a setting that is quickly becoming the norm for modern-day problem solving. Through their involvement, students will develop the critical soft-skills that future employers seek while gaining valuable experience in tackling some of the world’s most complex and demanding challenges.
Design principles are the DNA of any product, service or initiative. They guide development while being open to unforeseen influences. Design principles should be durable, consistent and authentic. While they can change over time, teams should not alter the principals without thoughtful consideration. Design principles are particularly useful at the start of a project as they provide direction without prescribing exact solutions to the myriad of decisions that will emerge. These principles were developed by the leadership team in collaboration with the Steering Committee and faculty, students and staff who have already contributed to this initiative.
DESIGN PRINCIPLES

Engage in rigorous research
We hold ourselves to the highest standards of research and scholarship so that our solutions can have the greatest positive impact on our world.

Make real impacts
We are committed to finding solutions to climate change without outsourcing problems to future generations. Our approach must solve a problem, with clear opportunities to leverage solutions into scalable and repeatable networks that can help others outside of UC Davis. We will use story and theory, but we won’t stop there. Our work is grounded in a function and utility that will make lasting, sustainable change.

Take a holistic approach
Climate change is a systemic challenge so our projects take a systemic approach. We view it from multiple (perhaps even competing) viewpoints. Our projects don’t shy away from this conflict and complexity. We consider all angles of a given solution.

Work across boundaries
We work together. We develop cooperative partnerships that transcend classic models of problem solving from the past. Our projects utilize multi/inter-disciplinary approaches to move beyond the classic academic approach.

Create transformative, disruptive and non-linear change
We will pursue groundbreaking, powerful solutions. Our work is informed and inspired by brave ideas and solutions bold enough to create a future with hope.

Educate the next generation of global innovators
We consider the next generation of global innovators to be at the heart of this initiative. Education is integrated into all our efforts so that future generations will be poised to further develop innovative solutions and ways of working together.
WHAT WE’VE DONE
At OneClimate, we’ve been working with the urgency required by the magnitude of our challenge. Over the past year, we’ve put together a cross-campus Steering Committee, hosted events that have sparked interest in all colleges and professional schools at UC Davis and laid the groundwork for partnerships with industry, government, NGOs and communities.

EXPLORATORIUM EVENT
On March 13th 2017, Office of Research and the UC Davis Muir Institute, in partnership with Exploratorium, hosted OneClimate: from California to the World, an event that showcased the university's collective strengths in climate research, spanning engineering, biology, ecology, marine sciences, art and design. Faculty from diverse disciplines participated in the event, with exhibits showcasing the impacts of ocean acidification and sea level rise, to virtual reality simulations of methane plumes. Faculty and students utilized the existing Exploratorium exhibits while also creating their own pop-up stations to populate the museum floor with interactive opportunities to learn about climate science and the effects of climate change. The event attracted over 200 guests, including faculty, alumni, donors, government and foundation representatives.

ONECLIMATE CAMPUS WORKSHOP
The first campus-wide OneClimate workshop took place on August 3rd, 2017. The event attracted over 80 people from a variety of backgrounds ranging from science to humanities, engineering and art. During the workshop, attendees engaged in activities and dynamics to help shape the purpose, objectives and principles for the OneClimate campus initiative. The half-day workshop aimed to understand the key elements to engage the campus community and entice participation with the initiative. The workshop also helped in identifying key areas for research. These included: food/energy/water/ecology nexus; education, and rigorous analysis of policies.
WHAT WE PLAN TO DO
Social unrest and global ecological instability require that OneClimate creates ambitious, daunting and unexplored ways of forging sustainable futures. We must develop an uncommon approach to deal with this uncommon time. While these ideas may feel distant and aspirational, the path to get there is pragmatic and tangible. Our immediate work falls into four key categories:

- **Projects** – the research and action that will make a tangible difference,
- **Organization** – the leadership structures and operations that will make OneClimate a sustainable, mutually-beneficial organization,
- **Place** – the development of a physical space to support the range of OneClimate projects and collaborations; and
- **Partnership** – the internal and external partnerships ranging from academia to government, industry, and financial supporters.

**Impact** – transforming society and creating planetary sustainability

The efforts in each of these areas will be guided by our design principles. The appendix outlines the implications that our principles will have on each of these areas.
FUTURE PROJECTS: SUPPORT STRUCTURE

We've created a framework that enables a wide range of activities with minimal overhead and provides a variety of ways for participants to connect to the initiative, increase opportunities for collaboration and address urgent issues in parallel with longer term efforts. The following demonstrate some prospective projects in each of these areas.
HIGH-RISK EXPLORATIONS
These projects allow for a wide range of exploration with minimal investment. They can infuse more traditional projects with the risky thinking that can often lead to breakthrough ideas. In addition, these projects, many of which will seem like long-shots, acknowledge the humility that will be necessary to handle the challenges we can’t yet predict.

MID-RANGE PROJECTS
While many of the high-risk projects will become intellectual compost, we do expect a select few to show enough promise to warrant additional commitment from the initiative. These projects should still have enough breadth to offer exploration across a wide range of topics, but not nearly the range of ideas that we’d expect to see in the high-risk category.

HIGH-CONFIDENCE ENDEAVORS
These projects are more mature in nature and have already demonstrated some outcomes that warrant more investment from the initiative. The initiative will support these projects so they will have the greatest impact. These projects will have a much more stringent vetting process.
EXISTING PROJECTS AT UC DAVIS
OneClimate is dedicated to leading the world in the full scope of climate solutions - from the humanities to applied research, basic scientific breakthroughs to discovering entirely new ways of thinking about our planet. Through UC Davis’ distinctive and collaboration-based culture, experts and students from all colleges and professional schools are working to transform the world today, and create a more robust, resilient and safe environment for tomorrow. The following pages provide just a small snapshot of some of the innovative research areas where UC Davis expertise is meeting the needs of the 21st century.
SCALING THE NEXT GENERATION OF FOSSIL-FREE ENERGY TECHNOLOGIES

Scaling green energy technologies, such as solar and wind power, will require re-imagining grids and smart-siting of energy systems worldwide. We are limited on space, so we must be innovative with our energy systems. Experts at the Center for Biological Diversity developed the Wild Energy Initiative to create a sustainable world-view for the 21st century, using proven on-the-ground methods and big data approaches to realize co-benefits for energy development and planetary health. In addition, the Energy Efficiency Center is leading in practical solutions to cut energy costs and reduce greenhouse gases in buildings and infrastructure – a win-win-win for people, businesses and climate.
FEEDING PEOPLE WITHOUT POLLUTION

How can we feed people, eliminate greenhouse pollution from agriculture, and restore healthy soils that boost carbon storage? Researchers at the College of Agricultural and Environmental Sciences, Russell Ranch, and the Agricultural Sustainability Institute, are demonstrating that we can tackle the world’s food challenges while inventing climate-smart practices to boost soil carbon and cut greenhouse gas emissions – all in a real, live working farm.
MANAGING ECOSYSTEMS FOR MAXIMUM CARBON DRAWDOWN

Billions upon billions of tons of carbon have been removed from natural soils, marine sediments, grasslands and trees since the industrial revolution. Researchers from Plant Sciences, Land Air and Water Resources, Biological Sciences, Environmental Science and Policy, Bodega Marine Laboratory and the Natural Reserve System are working to understand how natural carbon sequestration can be increased through biodiversity conservation, management intervention and innovative healthy soils practices. This work is vital to understanding how the natural world can help us by absorbing carbon pollution, both now and into the future.
GUIDING CLIMATE POLICIES
Cap-and-Trade is the most widely used free-market policy aimed at cutting carbon pollution. Will this policy meet its intended purpose of reducing global warming gases? Diverse teams of experts at the UC Davis Muir Institute are using big data and modeling approaches to understand Cap-and-Trade networks, ensuring that the markets are operating for maximally in reducing greenhouse gas pollution. This work benefits from policy research at the world-leading Institute of Transportation Studies, which is analyzing ways to cut greenhouse gases through smart automobile strategies and designing freight, land-use and management systems for maximum sustainable impact.
We are blazing trails at UC Davis, using the campus as a living laboratory that demonstrates to the world how to best achieve climate neutrality. “Big Idea” efforts led by UC Davis’ Program for International Energy Technologies and campus facilities are pioneering approaches between faculty, students and staff to test and operationalize cutting-edge research and translate this work to the public. This serves as a test-bed for a feasible carbon neutrality model for large institutions worldwide and provides the next generation of energy leaders with the knowledge and hands-on skills to foster global resilience to climate change.
REDUCING CLIMATE IMPACTS ON PEOPLE, ECOSYSTEMS AND ANIMALS

Extreme weather and climate hazards such as heat waves, drought, flooding, sea-level rise and wildfire, are imposing serious threats to human health and social justice. Animals and ecosystems are also highly vulnerable to ongoing and intensified threats of climate change. Researchers at the Center for Health and the Environment, the School of Medicine, the Center for Occupational and Environmental Health, the Center for Western Agricultural Health and Safety, the Bodega Marine Laboratory and the Center for Regional Change are teaming up to identify and solve climate-related risks to people and promote equity in response to global climate change. This work is complemented by efforts at the School of Veterinary Medicine, which has several disaster relief efforts that are helping to protect the health of both natural and domestic animals.
CREATING RESILIENT MARINE ECOSYSTEMS

Ocean chemistry is changing in ways that threaten marine life and put huge pressures on ocean food supply chains for people. The Coastal and Marine Sciences Institute and the Bodega Marine Laboratory are working with oyster and abalone farmers to buffer the effects of ocean acidification from carbon pollution. This research brings a unique, scientific perspective to oyster and abalone production, demonstrating how university researchers can work hand-in-hand with society by providing practical solutions that have a real economic impact.
WHAT’S NEXT
We’ve got a lot to do. Fortunately, we’re excited to do it and we couldn’t ask for a better place to start. UC Davis is poised to make a meaningful change in the biggest challenges our planet has ever seen.

An interdisciplinary team of undergraduates (Victoria Chau, Sierra Kennedy, Jessica Lam and Sandra Bae) construct an installation highlighting the phenomenon of land subsidence at SOFA CONNECT Chicago, a national art and design competition.
OUR 5-YEAR PLAN

2017 - Conceptualize
Strategy development
Business operations
Develop support and interest (internal)
Initial outreach to industry partners

2018 - Launch
Secure initial funding (internal)
Launch inaugural Projects
Develop partnerships (industry/community/gov)
Develop partnerships across disciplines
Create leadership structures
Cultivate external funding sources

2019 - Impact
Secure external funding
Grow scope, breadth and depth of projects
Firmly place OneClimate on the national stage
Demonstrate impact in the world

2020 - Scale
Increase level of engagement across all stakeholders
Demonstrate impact across multiple areas
Create physical space
Explore further partnerships across institutions

2021 - Transformational Change
OneClimate is a new model for positive impact
APPENDIX
EXISTING EXPERTISE AT UC DAVIS*
The following organizations at UC Davis each play a part in UC Davis’ world-class effort to combat climate change.

Air Quality Research Center
Agricultural Sustainability Institute
Bodega Marine Lab
Center for Policy and Behavior
Center for Health and the Environment
California Lighting Technology Center
California Environmental Law and Policy Center
Center for Occupational and Environmental Health
Center for Poverty Research
Center for Regional Change
Center for Spatial Technologies and Remote Sensing
Center for Water-Energy Efficiency
Center for Watershed Sciences
Coastal and Marine Sciences Institute
Confucius Institute

Energy Efficiency Center
Energy Institute
Environmental Justice Project
Forest Biology Research Center
Information Center for the Environment
Institute for Transportation Studies
John Muir Institute of the Environment
Natural Reserve System
Policy Institute for Energy, Economy and Environment
Tahoe Environmental Research Center
USDA California Climate Sub Hub
USGS Western Ecological Research Center
Western Cooling Efficiency Center
World Food Center

* This list reflects our current understanding of organizations working on climate change. Due to the growth of work in this area, this list may not reflect all activity on campus. If you know of an organization that should be included, please contact the initiative leadership team.
Agricultural Sustainability Institute

We view climate change through how to make agriculture and food systems more sustainable.

Air Quality Research Center

We view climate change through health and environmental effects related to urban/regional smog and indoor air quality.
Bodega Marine Lab

We view climate change through the health and diversity of ocean and coastal ecosystems.

bml.ucdavis.edu

California Environmental Law & Policy Center

We view climate change through protecting nature by increasing legal scholarship and establishing public policies.

law.ucdavis.edu/centers/environmental
We view climate change through research and lighting design and innovation for energy conservation.

cltc.ucdavis.edu

We view climate change through the effect of environmental agents on biological functions.

che.ucdavis.edu
We view climate change through the safety of working environments and communities.

coeh.ucdavis.edu

We view climate change through the interactions among policy institutions, human behavior, and political decisions.

environmentalpolicy.ucdavis.edu

Photo by Victoria Baird
We view climate change through understanding poverty and shaping the future of poverty research.

poverty.ucdavis.edu

We view climate change through supporting the building of healthy, equitable, prosperous, and sustainable communities.

regionalchange.ucdavis.edu
We view climate change through how our planet is shaped by time and space.

cstars.ucdavis.edu

We view climate change through The link between energy and water delivery and treatment systems.

cwee.ucdavis.edu
We view climate change through environmentally and economically sustainable solutions for managing rivers, lakes and estuaries.

watershed.ucdavis.edu

We view climate change through economic, ecological and social challenges of rapidly changing coastal and ocean environments.

cmsi.ucdavis.edu
We view climate change through cultural philosophy and sustainability of food and drink.

cultural philosophy and sustainability of food and drink.

confucius.ucdavis.edu

We view climate change through commercialization of efficiency technologies and training future leaders in energy efficiency.

commercialization of efficiency technologies and training future leaders in energy efficiency.

eec.ucdavis.edu
Energy Institute

We view climate change through transitioning to a sustainable energy future through research, education, and outreach programs.

caes.ucdavis.edu/research/centers/energy

Environmental Justice Project

We view climate change through effects of environmental issues on race, class, and gender.

explore.regionalchange.ucdavis.edu/ourwork/projects/initiatives/environmental-justice
We view climate change through research of genetics, tree cultivation, and the health of forest ecosystems.

forestbiology.ucdavis.edu

We view climate change through cataloging global environmental information that helps manage our natural resources.

ice.ucdavis.edu
We view climate change through reducing greenhouse-gas emissions from passenger and freight travel.

its.ucdavis.edu

We view climate change through decision making and innovation aimed at solving environmental problems and guiding climate policies.

johnmuir.ucdavis.edu
Natural Reserve System

We view climate change through leading stewardship of undisturbed natural environments for research, education, and public service.

ucnrs.org

Policy Institute for Energy, Environment & the Economy

We view climate change through delivering credible, relevant, and timely information and analysis to inform environmental policy.

policyinstitute.ucdavis.edu
USDA California Climate Sub Hub

We view climate change through helping California land users and managers maintain sustainable communities and ecosystems.
climatehub.ucdavis.edu

Tahoe Environmental Research Center

We view climate change through how our precious freshwater ecosystems are responding to change.
tec.ucdavis.edu
USGS Western Ecological Research Center

We view climate change through ecological research, monitoring and technology development.

werc.usgs.gov

Western Cooling Efficiency Center

We view climate change through development and commercialization of efficient heating, cooling, and energy distribution solutions.

wcec.ucdavis.edu
World Food Center

We view climate change through agriculture, food science, nutrition, health and policy’s impact on the planet’s food systems.

worldfoodcenter.ucdavis.edu
ONECLIMATE COLLABORATORS
The following individuals have been supportive of OneClimate through a variety of support efforts ranging from consultation to participation. Our supporters represent every college and professional school at UC Davis.

Khush Bakht Aalia, Horticulture Innovation Lab
Nazanin Akrami, LAWR
Monica Alandete-Saez, Plant and Environmental Sciences
Julian Alston
Cort Anastasio, LAWR
Gwen Arnold
Sarah Arriaga-Ramirez, Atmospheric Science
Katherine Bannor, Energy Efficiency Center
Christopher Barker
Marissa L. Basket
Bernardo Bastien, Geography
Barbara Bellieu, John Muir Institute of the Environment
William A. Bennett
Trish Berger
Marielle Berman, Global Affairs
Matt Blake, One Health Institute
Karen Block, Energy and Transportation Research
Arnold J. Bloom
Eduardo Blumwald
Sara Boles, Environmental Toxicology
Fernanda Bononi, Chemistry
Louis W. Botsford
Perinelle Sporon Boving, “Wildlife, Fish & Conservation Biology”
Liz Bowen, John Muir Institute of the Environment
Jennifer Boyer, John Muir Institute of the Environment
Kent Bradford, Plant Sciences
Catherine Brinkley, Human Ecology
Austin Brown, Policy Institute for Energy, the Environment, and the Economy
Nancy Bulger, Office of Research
Martin Burger
James Bushnell
Thomas A. Cahill
Dave Campbell, Human Ecology
Clare Cannon, Human Ecology
Chris Cappa, Civil and Environmental Engineering
Christopher Cappa
Arthur Caringal, Office of Research
Hillary Carneal, UCDSOM
Colin Carter
Tina Castillo, UC Davis Extension
AJ Cheline, Office of Research
Shu-Hua Chen
Matt Cheney, Executive Team

Gary N. Cherr
Eunah Cho, UC Davis One Health Institute
Valentin Chou, Office of Research
Michelle Clark, Office of Research
Jeffrey Clary, UC Davis Natural Reserves
Morgan Conley, School of Medicine
Richard Connon, Veterinary Medicine: Anatomy, Physiology and Cell Biology
Ana Lucia Cordova-Kreylos, Office of Research
Laura Crothers, Agricultural Sustainability Institute
Randy Dahigren
Helen Dahlke
Adi Damania, Plant Sciences
Jeannie L. Darby
Pawlok Dass, LAWR
Rebekah Davis, Viticulture and Enology
Marlene Denham, Office of Research
Ann M. Diller, Air Quality Research Center
Paul Dodd, Office of Research
Megan Doyle, “One Health Institute UCDSVM”
Jorge Dubcovsky
Gina Durante, Office of Research
John M. Eadie
Julie Ekstrom, Policy Institute
Richard Elliott, Population and Behavioral Health Services
Deborah L. Elliott-Fisk
Nancy Erbstein, Global Affairs
Valerie Eviner
Jan Faloona, “Land, Air & Water Resources”
Nann A. Fangue
Kristen Farrar, UC Davis College of Agriculture and Environmental Services
Allison Farrar, Sacramento City College
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Corinna Fish, DEVAR
Erica Fleishman
Joan L. Florsheim
Y. Hossein Farzin
Benjamin Finkel, Energy & Efficiency Institute
Claire Cannon, Human Ecology
Chris Cappa, Civil and Environmental Engineering
Christopher Cappa
Arthur Caringal, Office of Research
Hillary Carneal, UCDSOM
Colin Carter
Tina Castillo, UC Davis Extension
AJ Cheline, Office of research
Shu-Hua Chen
Matt Cheney, Executive Team
Litia Gaunavou, GIS
Brian Gaylord
Savannah Gil, CA&ES
Anna Gomes, AEE
Maria Gonzalez, Humphrey Fellowship Program
Rachael Goodhue
Bob Gragson, GRID Alternatives North Valley
Jen Greenier, Clinical and Translational Science Center
Jennifer R. Gremer
Rick Grosberg
Richard Grotjahn
Walter D. Gubler
Francois Gygi, Computer Science
Susan Handy
Andrew B. Hargadon
Susan Harrison
Quinn Hart, Library
Peter Hartsough, Land Air and Water Resources
Marjorie Haskell, Nutrition
Holly Hatfield Rogai, Graduate Studies
Tony Hazarian, Foundation and Corporate Giving
Rebecca Hernandez
Peter Hernes
Robert Hirmans
Tessa M. Hill
Emir Hodzic, VM: Medicine and Epidemiology
Marcel Holyoak
Jan W. Hopmans
William R. Horwath
Benjamin Houlton
Minpeng Hu, Land Air and Water Resources
Margarita Huesca Martinez, Land Air and Water Resources
Adele Igel
Matthew Igel
Javed Iqbal, International Programs
Lauren Jabusch, Bio and Ag Engineering
Louise Jackson
Eleni Jacobson, Campus Planning and Environmental Stewardship
Amy Meyers Jaffe
Lovell Jarvis
Marie Jaseniuk, Plant Sciences
Bryan M. Jenkins
Yufang Jin
Deanna Johnson, University Library
Christine Johnson, One Health Institute
Ellen Jordan, DEVAR
Steven R. Kaffka
Daniel Karp, Wildlife, Fish and Conservation Biology
Ermias Kebrab
Louise Kellogg
Alisha Kendall
Kat Kerlin, Strategic Communications
Camille Kirk, Office of Sustainability
Meghan Kirk, Environmental Science and Policy
Michael Kleeman
Lloyd Knox, Physics
kurt kornbluth, Program for International Energy Technologies
Diane Kruger, John Muir Institute
Dietmar Kueltz
David Kyle, Sociology
Felicia Lambating, Schools of Health Finance Unit UC Davis
Jennie Lane, One Health Institute
John Largier
Andrew Latimer, Plant Sciences
Harris Lewin, Evolution and Ecology/Genome Center
Cynthia (C.-Y.) Lin Lawell
Bruce Linquist
Becky Linvill, Office of Research
Laurie Litman, 350 Sacramento
Frank Loge
Kenneth J. Loh
Mark Lubell
Jay R. Lund
Kelsey Lyberger, Evolution and Ecology
Helene Margolis, UCD SOM Internal Medicine
Jennifer Martinez, University Development
beatrix martinez lopez, VM: Medicine & Epidemiology
Nelson Max, Computer Science
Toby Maxwell, “Land Air and Water Resources”
Molly McCarthy, UC Davis Humanities Institute
Mary McNally, School of Veterinary Medicine
Alvaro Medel-Herrero, Center for Health and the Environment
Pierre Merel, Agricultural and Resource Economics
Deanne Meyer, Animal Science
Fred Meyers, Internal Medicine
A. Keith Miles
Amanda Milici, College of Agriculture and Environmental Sciences
Brett Milligan, “Landscape Architecture Human Ecology”
Jeffrey Mitchell
Isabel P. Montañez
Frances Moore, Environmental Science and Policy
Veronica Morales
Jeffrey F. Mount
Peter B. Moyle, Center for Watershed Sciences
Sujoy Mukhopadhyay
Subra Muralidharan, Office of Chancellor and Provost
Lauren Muscatine, John Muir Institute of the Environment
Terry Nathan
Deb Niemeier
Malcolm North
HOW WE WORK

OneClimate’s strength is linked to the engagement of our participants. To that end, we are committed to making this initiative beneficial to everyone who gives their time to it. As an organization, we are committed to working according to these principles:

Lead with informed optimism
We will always acknowledge the dire circumstances and urgency of this planetary challenge but we will continue to be generative and seek solutions (even in the face of the seemingly impossible).

Respect everyone’s time
We seek to make everyone who participates get more from this initiative than they give to it. The OneClimate initiative is about working together to solve planetary threats from Climate Change.

Make our partners look good
The OneClimate initiative is not about enforcing a tops-down idea. We believe that in order to be successful we need to accelerate the work that’s being done already. To do that, we need to work with the perspective of making each other better.

Be intentional, always
Effective experiences don’t happen by chance. OneClimate uses design as a way to be thoughtful about the ways that we engage our participants, stakeholders and all touchpoints of the organization.

Lead with confidence and humility
We believe in our approach, and we know that we may be wrong. We execute with confidence and create with humility.

Be clear
Clear 5, 10, 15 year goals; Specific do-able goals; Clearly articulate the projects OneClimate will work on.
FUTURE PROJECTS

*Engage in rigorous research* - Our projects will represent the most rigorous scholarship and the world’s most thorough understanding of the challenge.

*Make real impacts* - Concepts are not enough. Our projects must make a real impact on the world (or have promise to do so in the near future.)

*Take a holistic approach* - Our projects look at the details and the systems as a whole.

*Work across boundaries* - We support projects that go beyond disciplinary boundaries. Our projects showcase the benefits of collaborative change.

*Create transformative, disruptive and non-linear change* - We don’t think small. Our challenges are great. Our answers will be greater.

*Educate the next generation of global innovators* - Our projects are infused with potential for the growth and development of our students.

ORGANIZATIONAL STRUCTURE

*Engage in rigorous research* - Our impact will only be as innovative as our organization. We structure our ways of working to model the way forward.

*Make real impacts* - Our structure helps us to work quickly and make real impacts in the world. We meet in order to act.

*Take a holistic approach* - OneClimate recognizes its place in the world. We recognize that our contributors are human beings with intrinsic value and we will treat them with the dignity and respect that they deserve.

*Work across boundaries* - Our team constantly pushes itself to connect to areas beyond its comfort or understanding. We cultivate connection.

*Create transformative, disruptive and non-linear change* - We develop systems to support disruption. We create space for creativity and non-linear ideas.

*Educate the next generation of global innovators* - Our leadership includes students. We find ways to bring students voices into the decision-making processes.

For more details, see “How We Work” in the appendix.
IMPLICATIONS FOR DESIGN PRINCIPLES

SPACE

Engage in rigorous research - The physical space will support the sharing of rigorous research. This could mean allowing flexible spaces to support visiting scholars, lectures or testing and research.

Make real impacts - Concepts are not enough. Our projects must make a real impact on the world (or have promise to do so in the near future.)

Take a holistic approach - Our projects look at the details and the systems as a whole.

Work across boundaries - We support projects that go beyond disciplinary boundaries. Our projects showcase the benefits of collaborative change.

Create transformative, disruptive and non-linear change - We don’t think small. Our challenges are great. Our answers will be greater.

Educate the next generation of global innovators - Our projects are infused with potential for the growth and development of our students.

PARTNERSHIPS

Engage in rigorous research - Our impact will only be as innovative as our organization and the collaborations we cultivate. We structure our ways of working to model the way forward.

Make real impacts - Our structure helps us to work quickly and make real impacts in the world. We meet in order to act.

Take a holistic approach - OneClimate recognizes its place in the world. We recognize that our contributors are human beings with intrinsic value and we will treat them with the dignity and respect that they deserve.

Work across boundaries - Our team constantly pushes itself to connect to areas beyond its comfort or understanding. We cultivate connection.

Create transformative, disruptive and non-linear change - We develop systems to support disruption. We create space for creativity and non-linear ideas.

Educate the next generation of global innovators - Our leadership includes students. We find ways to bring students voices into the decision-making processes.
ONECLIMATE: THE LONG-TERM PLAN

In the next 20 years, we will
create a climate resilient society
in order to adapt to the climate changes already in motion

In the next 30 years, we will
scale solutions to eliminate greenhouse gases from human activities
to prevent further atmospheric warming

Over the next few generations, we will
develop new models for human-behavior
to maximize long-term planetary sustainability