

ES NEWS

Environmental Studies Program

University of California, Santa Barbara

Fall 2016



Reducing Deforestation Through Nonstate Governance

Global markets for agricultural products, timber and minerals are critically important drivers of deforestation. Nonstate governance regimes have increasingly promoted conservation goals through market campaigns, deforestation moratoria and certification schemes; yet, there have been few opportunities to quantify their ability to deliver on promised conservation outcomes. Newly hired Assistant Professor Robert Heilmayr is researching cases such as these in Chile's timber sector and Southeast Asia by combining remote sensing and econometrics to quantify the impacts of nonstate governance.



Carla D'Antonio

On the faculty front, we searched and filled a long unfilled position in Ecological and Environmental Economics and are now searching for two faculty positions—one in Environmental Ethics and the other in Water Policy, Politics and Planning. In the front office we hired Ra Thea as our new Business Officer. She came to us from the far side of campus where she previously supervised undergraduate and graduate advisors in the Humanities. Martin, Cheryl, Erinn and Eric continued to hold down the fort and keep us all in line as the year's activities unfolded.

Water figured prominently in our program activities this year. We launched the inaugural Darcy Aston Lecture series on water issues in January, with a thought provoking panel of local luminaries discussing regional water allocation problems. In April, we hosted author and speaker Charles Fishman as the Manley Memorial Lecturer. He is the author of the book, *The Big Thirst*, a best seller that explores human relationships to water, how these differ across cultures, and the root of some of our water problems. To a packed audience he shared his insights into water consumption, quality and shortages around the world. We ended our annual brown bag lunch series with a talk on the history of water quality in America by environmental lawyer and Bren faculty member, Jim Salzman. Now we are searching for a faculty hire in the area of water policy to succeed Bob Wilkinson who retired in 2015 after 25 years of inspirational teaching. With this hire we anticipate many lectures on water issues as candidates come through this winter.

We have many things to be grateful for in Environmental Studies, including our inspiring body of undergraduate students, our committed faculty, our supportive Dean and our amazing alumni. The students challenge us to stay current, explore new grounds in our teaching and to pursue new avenues of research, teaching and mentorship. Our faculty and lecturers are dynamic, diverse and passionate about teaching. In addition to continuing our commitment to top-quality mentorship, we traveled throughout California, the US and the world to conduct research, deliver lectures and share knowledge in the pursuit of solutions to environmental problems. Our alumni continue to support the program in so many important ways allowing us to offer more field trips and numerous special opportunities for our students. We encourage you all to keep in touch, stop by when you are in town and also to fill out our alumni survey that Eric Zimmerman launched late this summer! We hope to gain much information from this thoughtful survey...information that will help us improve our program, stay current and respond to the needs of the changing world.

So thank you all for your continued interest and support as we forge ahead with our mission of transformative thinking towards environmental solutions.

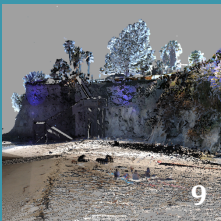
Carla D'Antonio

2016 was a busy year with lots of hard work by our faculty, staff and supporters. Thank you one and all for helping the ES ship navigate the ever-changing tides, and indeed it has been a year of change. We offered new courses, hired a new faculty member, had an unexpected retirement, got a new Business Officer, replaced our beloved but recently graduated peer advisors, acquired two more faculty affiliates across campus and for the first time ever got an official 'vice chair.' And importantly, we enriched our influence on the welfare of the global environment by graduating another large class of inspired undergraduate students.

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Environmental Studies would like to thank the program's students, faculty, staff, alumni and supporters who contributed content and suggestions for this year's publication of *ES News*.

Chair: Carla D'Antonio
Editing and Design: Martin Rodriguez
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ES Welcomes Assistant Professor, Robert Heilmayr

The Environmental Studies Program welcomes Dr. Robert Heilmayr, our new Assistant Professor of Environmental and Ecological Economics. Robert comes to UCSB from the University of Hawai'i at Manoa where he conducted a postdoc with Dr. Kim Carlson in the Department of Natural Resources and Environmental Management. He completed his Ph.D. in the Emmett Interdisciplinary Program for Environment and Resources at Stanford University. His nonacademic career has stretched from field botany in the Sierra Nevada to climate policy analysis and advocacy in Washington, DC.

Robert looks forward to developing a variety of new classes tailored to meet the needs of students within the Environmental Studies Program. This Spring, he will teach a class to introduce Environmental Studies majors to GIS. In 2017 he will begin introducing new courses applying economics to a variety of ecological, environmental and natural resource concerns.

Robert's research draws upon the natural and social sciences to tackle pressing questions about how society uses and governs its natural resources. His current projects focus on measuring the impact of private conservation efforts. In particular, Robert combines remote sensing and empirical econometrics to quantify the effectiveness of corporate

attempts to remove deforestation from their supply chains. This research has stretched from the forests of Chile, to the palm oil plantations of Southeast Asia.

In all of his research, Robert strives to conduct theoretically grounded, empirical work with particular relevance for policymakers. To accomplish this, Robert emphasizes science communication and engagement with policymakers. Robert's research has been featured in the popular press, including on CNN, NPR and in *The Economist*. He has advised regulatory and legislative processes at the state, national and international scale.



FACULTY & STAFF TRANSITIONS



CAMI HELMUTH

Cami served as Environmental Studies' Business Officer/Program Manager from 2013 to 2016. The program's staff has described Cami as "inspiring, and full of life." Cami has contributed greatly to the administration and work environment of the ES program and will be missed greatly!



DAVID CLEVELAND

After 22 years of service to the Environmental Studies Program, Dr. David Cleveland has retired. David has taught courses on sustainable agriculture, food systems and production, and diet and global climate. David will continue on as a research professor and will be working on projects relating to diet and public health.



RA THEA

With the loss of a great leader, comes another. Ra Thea started as Environmental Studies' Business Officer/Program Manager this past summer. As a graduate of UCSB and with 10 years of experience working on campus, Ra is excited to start her new campus adventure in ES.



DAVID STONE

David Stone was recently promoted to Senior Continuing Lecturer. For 20 years, David has been teaching courses on environmental impact assessment. He brings over 30 years of professional experience in environmental planning and expertise on Native American cultural resource issues.

David Cleveland Retires



How do we feed a growing population of 7.5 billion people with limited resources? How do we do it in a way that supports human and environmental health, and food justice? These are the questions ES Professor David Cleveland has been investigating for four decades.

David Cleveland joined the Environmental Studies Program in 1994 and has been affiliated with the departments of Anthropology, EEMB and Geography. Now, after 22 years as a UCSB professor, Cleveland has decided to retire, and has transitioned to being a Research Professor in ES and Geography. He continues to work with students, and has many on-going research projects. From creating and teaching some of the first



David Cleveland demonstrates a gopher snake to students in his small-scale food production course.

courses on agriculture and food at UCSB, to being UCSB's first-ever Sustainability Champion in 2009, all the way through to his retirement, David Cleveland has made a positive impact on students and faculty alike. "David's scholarship represents our program's mission in environmental studies," says Carla D'Antonio, ES Program Chair. "His research, teaching and mentorship are the embodiments of interdisciplinary study, combing the fields of

anthropology, human ecology and plant biology."

Cleveland's interest in agriculture began during his doctoral studies when he lived in a village in Northeast Ghana and studied how villagers adjusted to environmental and demographic changes. Cleveland's research since then has focused on food production, farmer knowledge, crop genetics, diet-climate relations, and food sovereignty, and he has worked with farmers and others across the globe throughout this time, including in Santa Barbara County.

His research over the years is covered in his book *Balancing on a Planet: The Future of Food and Agriculture*. "The scope of the book is large and he asks big questions about sustainability, carrying capacity of people on Earth and

sustainable agriculture for the future," says Ed Keller, ES and Earth Science Professor. "In my opinion [David's] book is destined to become a classic."

Over the years, his courses have gained much popularity among students. As an expert on agriculture and sustainable food production, David has uniquely integrated the natural and human sciences and has explored new perspectives on agriculture and food policy with his students. Cleveland has taught and created courses that bring his research into the classroom, including: World Agriculture, Food and Population, Biotechnology Food and Agriculture, Small-Scale Food Production, and Diet and Global Climate Change. An undergrad/grad research seminar on local food systems he began in 2010 has involved students in collecting and analyzing data and making professional presentations, as well as co-authoring several peer-reviewed journal articles.

Cleveland has had a big impact on students, and many credit his courses with changing the way they analyze and solve problems, the way they approach other classes and their future plans. Our profit-driven food system is now a major driver of global climate change, of an epidemic of non-communicable diseases like diabetes, heart disease and cancers, and of extreme inequity. Cleveland has inspired a new generation of students to see these problems as opportunities for making a positive difference, by working to make food more nutritious, environmentally sustainable, and socially just.



Cleveland in his household garden.



Cleveland giving a lecture on diet and climate change.

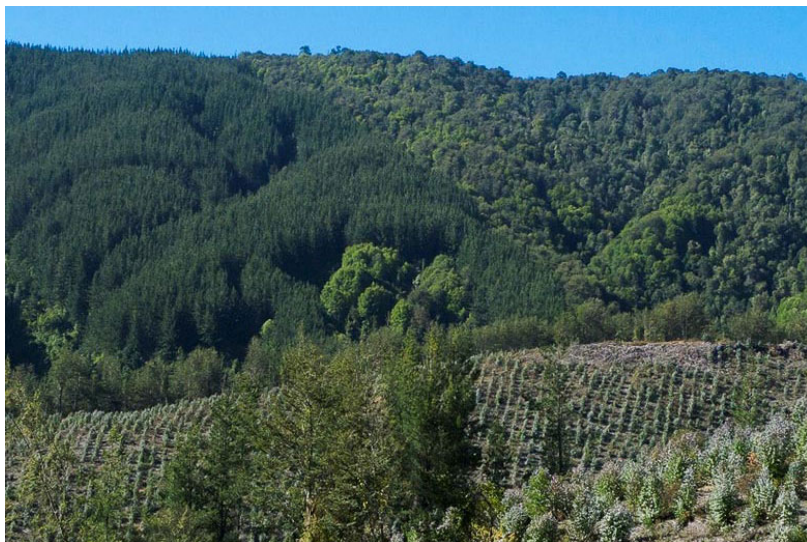
Nonstate Governance Impacts on Chilean Forests

Assistant Professor Robert Heilmayr's research reveals the significance of nonstate governance collaboration and deforestation.

Whether buying organic tomatoes, shade-grown coffee, or sustainable timber, people are increasingly turning to certification systems to help them choose more environmentally friendly products. But do these certification systems have an impact on the ground?

In a paper published earlier this year in the *Proceedings of the National Academy of Sciences*, incoming Environmental Studies Assistant Professor Robert Heilmayr and his co-author Eric Lambin explored this question through a combination of remote sensing and econometrics. Focusing their attention on the biodiverse forests of Chile, they measured the impact of eco-certification on deforestation rates. After evaluating several different programs, they found that certification reduced deforestation by 2-23 percent on participating properties. Policies that involved substantial collaboration between industry and non-governmental organizations (NGOs) were more effective at slowing deforestation than more confrontational strategies designed in isolation by either industry or NGOs.

Their results suggest that private, market-driven interventions may be a useful complement to traditional approaches to conservation such as the



Two rotations of plantations and temperate forest in Central Chile.

establishment of protected areas. As a part of the Environmental Studies community, Heilmayr is expanding his research to explore corporate commitments to end the deforestation associated with palm oil production in Southeast Asia, and soy expansion in Brazil.

Restoring Plant Communities

ES Professor leads restoration projects in Santa Barbara County and Hawai'i.

When introduced to a new habitat, invasive plants can cause serious ecological disturbance and reduce biodiversity. Plant ecologist and Schuyler Professor Carla D'Antonio completed a long-term study of invasion, degradation and prospects for the restoration of degraded dry forests in Hawai'i, and launched three new research projects.

With funding from the National Fish and Wildlife Foundation, and several collaborators, her research group is exploring ways to manipulate ecological processes to restore chaparral eco-systems that have been degraded by repeated short interval fire. With a team including many ES undergraduate students and graduate student Maddie Nolan, D'Antonio has launched a large ecosystem restoration experiment at Sedgwick reserve to evaluate ways to restore California grassland in the face of on-going and future drought. In addition, with support from the National Science Foundation, D'Antonio and various collaborators are launching a large-scale study of processes limiting re-growth of native forest understory in high elevation Hawaiian forests degraded by decades of intensive cattle grazing, and now heavily invaded by African grasses. These forests are some of the last refuges for critically endangered Hawaiian forest birds.



Planted stands of a native tree, *Acacia koa* are the focus of NSF funded project in Hakalau National Wildlife Refuge in Hawai'i.

A Diverse Way of Knowing

ES Lecturer Julie Maldonado participates in & co-organizes two indigenous movement programs.

In recent years, indigenous groups have become increasingly active in discussions and movements on climate change. In fact, in 2014, the IPCC recognized the need to include indigenous knowledge in climate adaptation. Prevalent among many indigenous groups are the impacts of climate change that disproportionately affect their communities that are already marginalized by larger political forces.

This year, ES Lecturer, Julie Maldonado co-organized two different programs on indigenous peoples and climate change: Rising Voices 4 and the Protect our Public Lands Tour. Maldonado has been teaching courses on environmental disasters, risk and displacement, global tourism and development. She serves as the Director of Research for the Livelihoods Knowledge Exchange Network and is a consultant for the Institute for Tribal Environmental Professionals.

Rising Voices began to increase engagement between indigenous communities and indigenous and non-indigenous scientists to address the challenges of understanding and responding to climate change. This year indigenous leaders,

students, scientific professionals, environmental experts and citizens gathered on the Big Island of Hawai'i to explore story-telling as a channel of knowledge among indigenous groups and its effectiveness in science communication.



Julie Maldonado during a breakout session with participants in Rising Voices 4.

In addition, this July, Maldonado journeyed with 23 other indigenous organizers, scholars and activists across the United States on the Protect our Public Lands Tour to lead and participate in the March for a Clean Energy Revolution. Ten thousand citizens took to the streets of Philadelphia where one of the demands was for the Protect Our Public Lands Act that would end all

fracking on U.S. public lands. The support for indigenous community members during today's injustice is helping demonstrate the needs for embedding justice into the transition to a clean energy economy as well as climate change. For more information on the Protect our Public Lands Tour or Rising Voices 4, please visit: www.es.ucsb.edu/people/julie-k-maldonado.



Protect Our Public Lands Act caravan members visit the site of Dooda (NO) Desert Rock Power Plant, Diné (Navajo).



Protect Our Public Lands Act caravan members lead the march for a Clean Energy Revolution in Philadelphia, PA.

Simone Pulver Returns from Sabbatical

Simone Pulver completes SESYNC Immersion Program.



Pulver gives a lecture on contemporary social theory for SESYNC.

Associate Professor Simone Pulver was in residence at the National Center for Socio-Environmental Synthesis (SESYNC) in Annapolis, MD in the spring of 2016. While in residence she served as the Distinguished Faculty Mentor for twenty-five postdoctoral scholars as part of the SESYNC Immersion Program. The program immerses early career academics in disciplines relevant to socio-environmental research.

Pulver facilitated five workshops, four covering the disciplines of ecology, economics, anthropology, and sociology and the last one focused on social change. Since returning to campus, Pulver continues to collaborate with the Immersion Program postdoctoral scholars on two new projects; an edited volume on the foundations of socio-environmental research and a journal article on research frontiers. Pulver saw a lot of parallels between Annapolis and Santa Barbara, and she is eager to continue building links between SESYNC and UCSB.

IPEES Hosts First Annual Mixer

The Interdepartmental PhD Emphasis in Environment and Society (IPEES) hosted its very first annual mixer on October 19, 2016. The event brought together students and faculty participating in the emphasis for an afternoon of conversation.

During the event, Simone Pulver announced her appointment as the new director for IPEES. Her educational background as well as her academic training and mentorship make Simone an ideal choice for this position. Simone will be teaching the Core Seminar in the winter for students admitted into this year's cohort. For more information about IPEES, please visit: www.es.ucsb.edu/phd.

Egregious Polluters

Rankings of firm environmental performance consistently reveal that the production of pollution is uneven. There are some facilities, called "super polluters," whose pollution burden on the environment is egregious compared to peer facilities. ES Professor Simone



Pulver and her collaborator, SUNY ESF Professor Mary Collins, received a \$350,000 research grant from the National Science Foundation to track inequality in the production of pollution by industrial facilities in the US. The research examines the social factors that enable the persistence of super polluters in various communities and how the pattern of super-pollution has changed over time.

Bear Essential?

This fall, Associate Professor Peter Alagona launched a new collaborative research group to study the past, present, and potential future of grizzlies in California. On the eve of the Gold Rush, an estimated 10,000 grizzlies roamed our state. By the late nineteenth century, grizzlies had become rare here, and they went extinct probably in the mid-1920s.

It has been nine decades since the last credible sighting of a grizzly in California. Yet several factors—including our state's ample wildland habitat, the return of wolves, and promising trends in brown bear recovery programs elsewhere, including in Europe—suggest that California may once again someday host a population of wild grizzlies. The goal of Alagona's California Grizzly Study Group is to develop a community of scholars based at UCSB able to support a well-informed public conversation and decision-making process for this state's most famous extinct species and official mascot.



Former IPEES Director Peter Alagona and Simone Pulver during the Fall Mixer.

35th Annual Manley Memorial Lecture

Author and this year's Manley Lecturer, Charles Fishman gives lecture on the future of water.

This year, Environmental Studies hosted its 35th Annual Manley Memorial Lecture featuring Charles Fishman. His talk, "The Big Thirst: Creating the Water Future We Need, in California and Around the World," was held on April 11, 2016 and was co-sponsored by the Bren School of Environmental Science and Management. Charles Fishman has become one of the most forceful and public voices on water issues. His book, *The Big Thirst* challenges how people think about water and its management.



Charles Fishman.

The general scope of Fishman's talk focused on how water in the US and across the globe has become disproportionate in its management, use, and accessibility. He gives the example of a village in Vasant Kunj, where dozens of families gather each morning with hoses and buckets awaiting the arrival of a water truck tank holding 2,500 gallons of water. He explains that the thought of water as an abundant, free and clean resource has been replaced by a feeling of "water anxiety," particularly in California. As dramatic as the

Book Award and Upcoming Publication

Affiliated Assistant Professor Jeff Hoelle receives top award from LASA.

In 2015, *ES News* featured a piece on Affiliated Assistant Professor, Jeff Hoelle's new book, *Rainforest Cowboys*. Earlier this year, The Brazil Section of the Latin American Studies Association (LASA) awarded Jeff top honors for his book. The awards committee has described Hoelle's book as a significant piece of scholarship for understanding the lives of working people in Brazil and Brazilian studies as a whole. Hoelle's research interests focus on the human-environment interactions in the Brazilian Amazon. His current research aims to understand the economic and cultural factors that contribute to the expansion of cattle raising in the western Amazon.

ES Lecturer Lori Pye receives book contract.

Earlier this year, Routledge Publishing reached out to Lori Pye with the idea of publishing a textbook on ecopsychology. Lori Pye has taught Environmental Studies' course ecopsychology course since 2007. She is the founder and president of the Viridis Graduate Institute for Ecopsychology and Environmental Humanities. The text will examine how humans are biologically, ecologically and psychologically interconnected to the world and how human behavior and practices impact every system on the planet in both creative and destructive ways. The practice promotes a response toward the continued despoliation of the environment, society and economics, all of which spawn from interconnected narratives.

challenges are, Fishman says the problem with water is not water itself, but rather people. Water innovation has grown tremendously in recent years, yet many people rarely think about water and water use. In America, where accessing water is as easy as turning on the tap, these issues will become more prevalent as people begin to become water conscious by understanding water and knowing how it can be used in a smart way.

TALES from Environmental Studies

ES LPSOE, Helene Gardner, invited to speak at new UCSB talk series.

Helene Gardner, LPSOE in Environmental Studies, has been invited to be one of three inaugural speakers in "Teaching TALES," a new series of talks, inspired by the TED format and developed by UCSB Instructional Development (I.D.). The TALES (Teaching and Learning Excellence Series) will focus on how to become a more effective teacher and highlight creativity, inspiration, and engagement in UCSB teaching. Each session will begin with a personal, vibrant, and thought-provoking account of instructional experiences that have had profound impacts on both students and teachers and will be followed by dialogue with the audience.

TALES presenters are nominated by their peers as excellent models of pedagogical practice in undergraduate education. As luck would have it, Helene will be speaking in the TALES series on...tales: the use of story-telling and case-studies in the science classroom. Her presentation is planned for winter quarter.



Helene Gardner.



Different LiDAR scans over time allow the rates of erosion and other changes to be measured in Isla Vista.

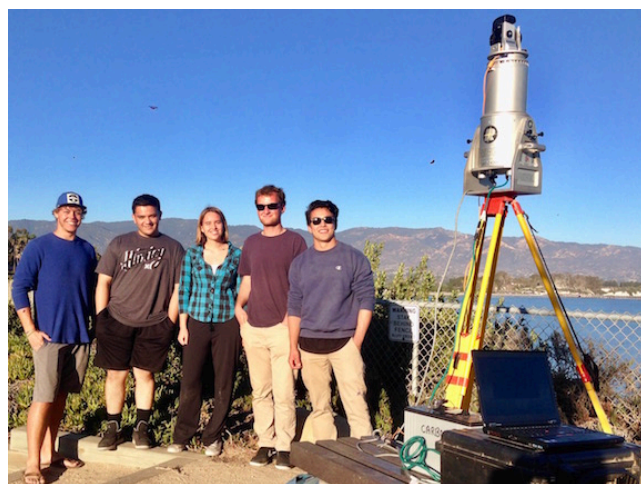
Leveraging LiDAR

Students participate in research study that measures coastal erosion rates before, during and after El Niño.

California has the third largest population living within a meter of sea level in the United States. A major impact of climate change with rising sea levels is increased coastal erosion of beaches and sea cliffs. Students from Environmental Studies and Earth Science have been participating in a study led by Professor Ed Keller and graduate student Paul Alessio that aims at quantifying the extent of coastal change in beaches and sea cliffs as a result of large wave attack and sea level rise.

While there have been no violent storms along the Santa Barbara coastline, wave impact has been harsh. LiDAR (Light Detection and Ranging) is remote sensing technology that sends out and measures reflected light to produce high-resolution 3-D models that can map these impacts. Some of sites include: Isla Vista, Goleta Beach, Coal Oil Point, and UCSB.

Last winter, the team scanned each site after every storm and has been re-scanning every two months since then. Through this study, participating students are using this technology to better understand sea-cliff erosion. El Niño causes sea level to rise about one foot, which may increase erosion rates by up 10 times. The team anticipates that the analyzed data and the results from last winter will be made available by the end of this year. Information from this study will be used to inform coastal planners on adaptive management solutions to sea level rise.



Students using LiDAR technology along the beach cliffs at UCSB.

Out of the Classroom and Into the Field



Students in **ES 119** have the opportunity to explore processes in CA habitats and the challenges of their management. Students take weekly fieldtrips to regional habitats such as salt marsh, oak savanna and chaparral!



In **ES 130A**, students examine the human dimensions of environmental change. Here, Tim Robinson from the Cachuma Operation and Maintenance Board speaks to students about current project facilities.



Environmental science and human-environment interrelationships are key in **ES 2**. By making trips like the one to the REEF Touch Tanks, students gain a better understanding of current environmental issues.



For two weeks, students travel across the state to the Central Valley, Yosemite, various watersheds and more in **ES 176B**. This provides students a first-hand opportunity to see and discuss water policy and management.

Toxic Jails and Prison Ecologies

Students research the impacts of the U.S. prison systems on environmental and public health.

ES Professor David Pellow and a team of UCSB undergraduates have been gathering data on the impacts of the U.S. prison systems on environmental and public health. The team of students include: Marjan Abubo, Yue Shen, Mark Avalos, Annie Milburn, Amy Tam, Alison Thompson, Ivan Rodriguez, Reid Bondard and Sheila Estrada.

The Prison Ecology Project was created by the Human Rights Defense Center in order to investigate, document and take actions to address the ways in which mass incarceration degrades the natural environment and the health of those inside or nearby prisons and jails. The mission is to map the intersections of mass incarceration and environmental degradation, and create action plans to address the multitude of problems found there.

In many respects, the vast prison population in the U.S. has become a nation unto itself. Incarcerated people, formerly-incarcerated people and their families

share a common experience that is akin to being part of a cultural diaspora with communities spread across the county in detention facilities.

Collectively the team has uncovered scores of cases across the nation where the health of ecosystems, nearby communities, and prisoners themselves may be placed at risk due to prison construction, geography, and the routine operations of prisons and jails. The team will continue their research into this academic year and they anticipate to have preliminary results next fall.



Prison Ecology illustration by Peter Hermann (Sierra Club).

Cut the Grass. Grow a Garden!

ES students receive publication for their research on the potential for vegetable gardens to reduce greenhouse gas emissions.



Front-yard vegetable garden. Image courtesy of Todd Anderson (*The New York Times*).

Eight ES students, led by ES Research Professor David Cleveland found that greenhouse gas emissions can be reduced by 2 kg for every kilogram of homegrown vegetables, when compared to store-bought vegetables. The group's model included changes in greenhouse gas emissions based on converting lawn area to garden, reducing purchasing of store-bought vegetables, reducing greywater exported to treatment facilities, reducing household organic waste exported to landfills, and composting organic household waste.

Most noteworthy is that if half of the state's single-family homes grew gardens big enough to supply 50% of their vegetables, they could contribute more than 7% of California's goal of reducing emissions to 1990 levels by 2020. In addition, the study calculated that for an individual family, growing half of their own vegetables would be equivalent to a drop of 11% in greenhouse gas emissions from driving a standard car.

This study is the first to provide evidence that growing vegetables at home can help reduce greenhouse gas emissions. Results from this study could provide incentives for governments to support household gardens as part of climate mitigations strategies. To view the publication, visit: <http://www.sciencedirect.com/science/article/pii/S0169204616301323>



CONGRATULATIONS CLASS OF 2016!

This year, the Environmental Studies Program graduated 244 students, placing the class 2016 as the sixth largest graduating class in the program's 47-year history. The ES Program's grand total of graduates since 1970 is 6,317!

By the numbers:

- 58 students graduated with a B.S. in Environmental Studies.
- 177 students graduated with a B.A. in Environmental Studies.
- 9 students graduated with a B.S. in Hydrological Science & Policy.
- 37 students completed a double major, while 46 students graduated with an official minor.



Outstanding Seniors:
Emily McCord and
Marina Varano.



Outstanding Senior Thesis Award
recipient, Kristina Stodder, and Thesis
Instructor, Greg Graves.



Outstanding Service Award recipients:
Amanda Shoemaker, Kristyn Payne,
Nicole Jenkins, Jessica Foster &
Mackenzie Forgey.



Despite the rain, dozens of family and friends came to support this year's graduates.

For more information about the ES Program's 2016 Commencement Reception and Awards Program, please visit: www.es.ucsb.edu.

2016 Community Service Award



Congresswoman Lois Capps

Congresswoman Lois Capps received this year's Community Service Award. Mrs. Capps serves on the Committee on Energy and Commerce. She sits on the Health, Energy & Power, and Environment & the Economy subcommittees. From these posts, Capps focuses on Medicare reform, the nursing shortage, cancer, mental health, energy policy, and the protection of our air and water.

She also serves on the Natural Resources Committee and sits on the Subcommittee on Energy and Mineral Resources, and Subcommittee on Federal Lands. Her focus on this committee is on energy production, fisheries and wildlife, public lands, oceans, and Native Americans.

Congresswoman Capps has been at the forefront of efforts to protect the environment. She has led efforts to prevent new oil and gas drilling off our coast and on the public's lands and protect consumers from shouldering the financial burden of cleaning up water pollution in their water supplies.

ES Alum and One of the Most Protected Places on the Planet

Sheila Sarhangi ('01) serves as the campaign director for the expansion of Papahānaumokuākea.

During her time at UCSB, Sheila Sarhangi took advantage of the opportunities (many of which offered through Environmental Studies) to find her place in the environmental field. "I wasn't sure what I wanted to do, so I knew that having a lot of exposure to diverse sectors could help narrow my path." Sarhangi was an education and outreach intern at the Channel Islands National Marine Sanctuary. She also worked with biologists on San Nicolas to study the island's endangered foxes, and was a research assistant for a native grasses project at Sedgwick Reserve.

After graduating in 2001, she explored professional writing and began working for Condé Nast *Traveler* magazine and took an immediate liking to the world of writing. After two years, she moved to Oahu and fused her two passions by writing about environmental issues for local publications. By writing environmental pieces, Sarhangi soon gained interest in advocacy by working on some of the issues she was reporting on. She began by working with an international

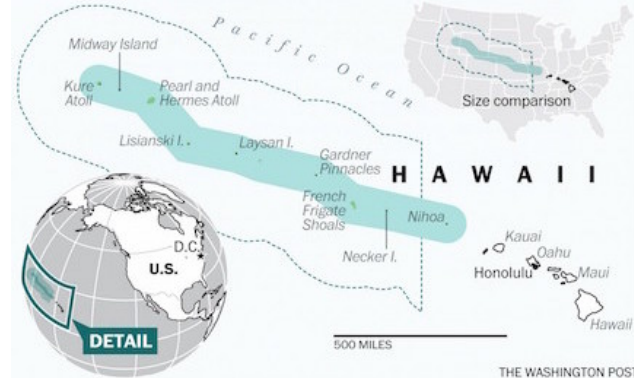


Sheila Sarhangi ('01)

nonprofit organization on strategic campaigns that targeted ocean conservation goals.

Very soon after, Sarhangi began to work with a group of prominent Native Hawaiians who were campaigning to expand the protections for Papahānaumokuākea. Sarhangi led the team and was responsible for organizing, lobbying, media engagement, and strategic communications. In September 2016, the group's efforts paid off when the Obama administration created the largest marine reserve on the planet. Nonetheless, Antarctica

beat it two months after. She says this administration has made serious commitments to environmental protection. In anticipation of the country's change in political landscape, Sarhangi had this to say: "I truly believe that change comes from us, and in my experience, when the other camp is fighting hard, I fight harder!"



ES Alumnus Host First Ever LoaFest

David Fortson ('97), LoaTree CEO, and Eric Cardenas ('98), COO, celebrate LoaTree's successes by hosting local music event.

David Fortson has been an active environmentalist since before arriving to UCSB in 1993. While studying both environmental studies and ecology, David served as the chair of the Environmental Affairs Board and was involved with Associated Students Recycling Program. In 2009, he founded LoaTree, a local lifestyle company that inspires people to "live for a better world." LoaTree has helped produce many community events including: Santa Barbara Earth Day, the SOL Food Festival and Green Drinks. When fellow ES alum, Eric Cardenas, joined David in 2011, they launched LoaCom, a company that offers marketing, business and organizational development services to businesses and organizations. Eric brings expertise in nonprofit organization and campaign production having worked extensively as the program director for the Environmental Defense. David and Eric remain active with the Environmental Studies Program and frequently give guest lectures for the program's ENV S 190 colloquium course on current topics and careers related to environmental studies.

LoaTree has grown tremendously over the years due to David and Eric's commitment in environmental advocacy, community outreach and campaigning. Most recently David and Eric hosted LoaFest, a community festival that featured live music, local food, local brews and activities to support the next phase of their company's growth. For more information on David, Eric and LoaTree, please visit: www.loatree.com



David Fortson ('97)

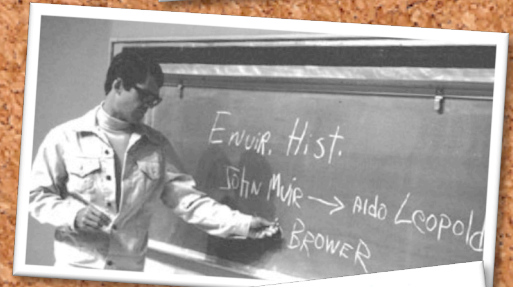


Eric Cardenas ('98)

Attention ES Program Alumni:

Since 1972 the Environmental Studies Program at UCSB has graduated over 6,300 alumni!

This year, Environmental Studies has launched the **2016 ES Alumni Survey**. One of the most important tools the ES Program uses to demonstrate the value of an environmental studies education is sharing the successes of our graduates with current and future students. Your input helps our faculty evaluate and enhance our current and future student's educational opportunities. Please visit: www.es.ucsb.edu/alumni to view and complete the survey. We thank you for your response!



Essential Water

Environmental Studies Hosts First Annual Darcy Aston Memorial Lecture.

September 10, 2016, marked the second anniversary of the passing of ES alumnus, Darcy Aston (class of 1981). During the past two years, a group of Darcy's friends and colleagues in Santa Barbara have honored her work by creating an annual lecture in the area of water—Darcy's passion. The Sustainable Water lecture and colloquium or panel celebrates Darcy's commitment and passion for the environment and sustainable management of water resources.

The annual free lecture, discussion and community gathering is meant to engage the general public, current and past students and faculty in a dialogue about local and regional water issues and to inspire participation in finding solutions to water-related challenges. The lectures focus on innovative approaches to the complex issues of water supply and water quality; watershed protection, with an emphasis on protection of wild places and wildlife; public health; and minimizing the human footprint on earth.

On January 30, 2016 we held the first annual lecture and community gathering. More than 80 people came together at the Mosher Alumni House to hear from local water experts and join a conversation about water resources in Santa Barbara and beyond. The lecture, titled "Essential Water: Embracing and Shaping the Future of a Limited Resource," was followed by a potluck dinner. Alumnus Alison Jordan moderated the event and the speakers included Nick Welch (SB Independent),



Friends of Darcy gather during the annual event's potluck.

Linda Krop (EDC), and Lynn Rodriguez (Ventura water manager). For more information about the first lecture, please visit: www.es.ucsb.edu/news/event/433.

2017 LECTURE AND GATHERING

Planning is underway for the Second Annual Darcy Aston Memorial Lecture and Community Gathering. The event will be held on **January 28, 2017 at 4:00 p.m. in Bren 1414**. Please visit www.es.ucsb.edu/news for the formal announcement and updates.

FUNDRAISING UPDATE

An endowment of \$40,000 will support the series in perpetuity. A generous donor has pledged to contribute \$5,000 once the fund earns a match of \$5,000! The goal is to raise the full \$40,000 by Dec. 31, 2016.

Recent Donors

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The goal of Environmental Studies at UCSB has always been to provide our students with the best opportunities to explore, learn, and develop. Each year, we are fortunate to receive support from alumni, friends, family and community members who recognize the value of our program. The support from our donors goes a long toward enhancing classroom and field-trip experiences, providing scholarships and awards, and other student support. We invite you to join us in pursuit of our goals by donating to one or more of the following causes:

William Freudenburg Academic Fund

The William Freudenburg Academic Fund was established in 2011 to honor the quintessential Environmental Studies Professor. William Freudenburg was a dedicated and beloved teacher, a committed member to the UCSB community and a world-class scholar. This fund supports the educational mission of the ES Program by enhancing teaching and learning, and building closer ties among faculty and students. It specifically supports field trips, classroom technology, and teaching assistants among other essential functions.

Education Development Fund

This fund directly supports undergraduate student activities and development through Environmental Studies internships, scholarships, and program awards. Support from contributions to the fund include, but are not limited to the Marc McGinnes Environmental Law and Advocacy Scholarship, the Outstanding Senior Award, and the Matthew Charles Decker Scholarship.

Environmental Studies General Fund

The Environmental Studies Program has a general fund, which is intended to give the chair complete discretion to provide funding for the program's most pressing needs.

Darcy Aston Memorial Lecture Fund

This fund will support an Annual Lecture and Community Gathering on Water Sustainability. These annual lectures will focus on innovative approaches to the complex issues of water quality and watershed protection with an emphasis on the things that were most important to Darcy: protection of wild places and wildlife, public health and minimizing the human footprint on earth. These annual lectures will also serve as an opportunity for Darcy's friends, family and colleagues to gather to honor and remember Darcy.

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