Nelson Institute for Environmental Studies
UNIVERSITY OF WISCONSIN–MADISON

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THE COMMONS

For alumni and friends of the Nelson Institute for Environmental Studies at the University of Wisconsin–Madison

Tales from Planet Earth film highlights Emily Ford's journey

UW-Madison and IIASA partner on environmental policy projects

By Bekah McBride

After more than 40 years of collaboration, the University of Wisconsin-Madison and the International Institute for Applied Systems Analysis (IIASA) are officially partnering on a variety of policy-relevant projects related to energy, climate, air quality, and more. This new partnership will be hosted within the Nelson Institute Energy Analysis and Policy (EAP) program and is made possible thanks to a generous donation from EAP co-founder Wes Foell.

IIASA is an independent, international research institute that conducts policy-oriented research on a global scale. Located in Laxenburg, Austria, they work with experts around the world and across disciplines on projects related to climate change, energy security, population aging, and sustainable development. By partnering with IIASA, UW-Madison faculty and staff hope to provide students with unique learning and collaboration opportunities.

Greg Nemet. Photo credit: La Follette School of Public Affairs, UW-Madison

Nelson Institute affiliate and La Follette School of Public Affairs Professor, Greg Nemet is leading the partnership on behalf of EAP, but he is working closely with the Department of Atmospheric and Oceanic Sciences and 2017-2021 Gaylord Nelson Distinguished Professor Tracey Holloway, EAP chair Rob Anex, and others from across campus to develop projects that will benefit the world.

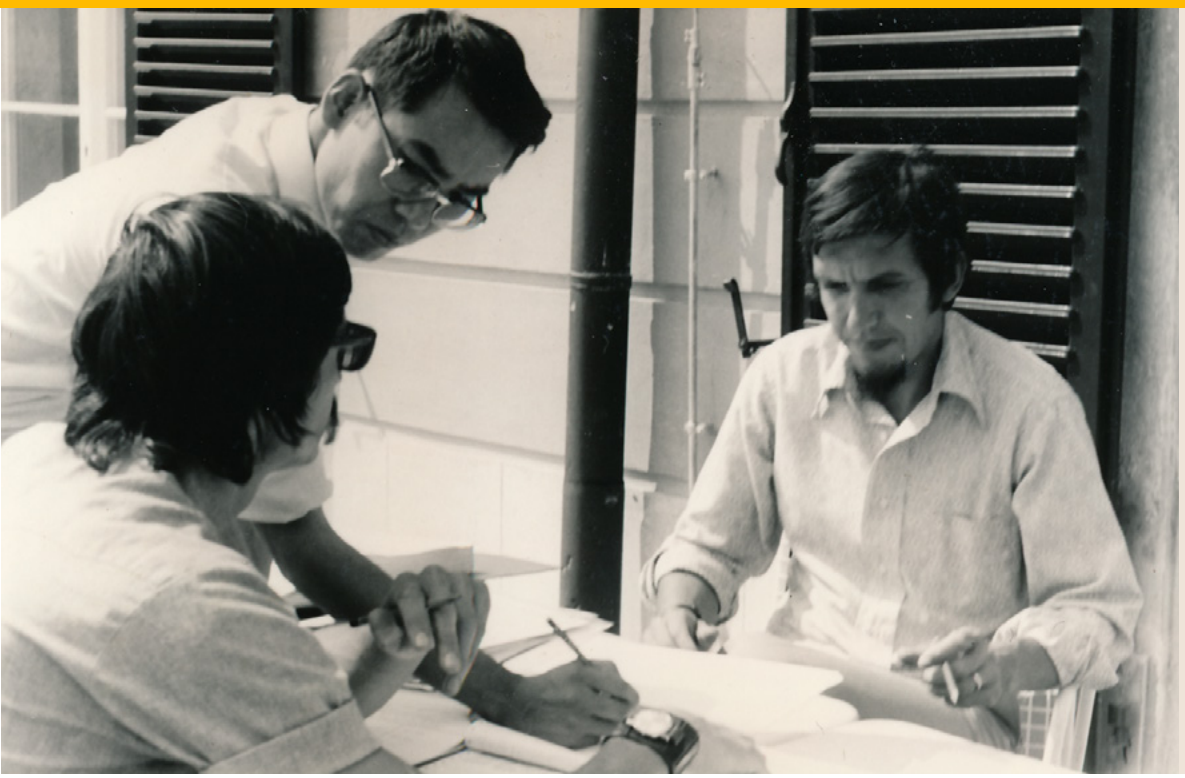
"The IIASA/UW EAP Initiative is exciting. I have been working with IIASA continuously since 2004 when I joined as a summer graduate student," Nemet shared. "I am currently working with IIASA on an EU-funded project on negative emissions and a Japanese-funded project on energy efficiency. There are terrific scientists at IIASA with whom I enjoy working and I am excited about bringing others, especially EAP students, into the collaboration."

Likewise, Holloway is excited to connect more students with IIASA, an organization that has offered her many opportunities over the years.

Tracey Holloway. Photo credit: The Holloway Group

"IIASA and UW-Madison have a long history of collaboration, dating back to modeling work in the 1970s by EAP co-founding professor Wes Foell. Many EAP faculty and students - including me - have been shaped through collaborations with IIASA," said Holloway. "When I was a graduate student, I spent a summer at IIASA working with their air quality group, which is one of the best in the world. Since then, the majority of my Ph.D. students have also spent time at IIASA, and in every case it has really benefitted their education and career."

Through this new partnership, Nemet, Holloway, and Anex hope to offer students and fellow faculty new opportunities to connect with IIASA which is known as a global leader in policy-relevant science and computer modeling. The opportunities will come through research, networking, and conferences. In fact, the first official IIASA and UW-Madison partnership event took place on



"I believe the partnership also has the potential, nationally and globally, to contribute to the important role of science in diplomacy and international understanding."

– Wes Foell

Left to right: Koichi Ito, Robin Dennis (then a Wisconsin post-doc and air pollution specialist) and Wes Foell, who at that time, was head of IIASA's "Ecology/Environment Project." Foell and this team were applying for the "Wisconsin Energy Model" (WISE), to build long-term energy/environment scenarios. Photo courtesy of Wes Foell

November 23, 2021, when IIASA and EAP hosted a webinar to discuss the outcomes of COP26 and implications for climate action around the world.

"By growing our connection with IIASA, we are linking with a hub of international innovation on the environment. I can't think of a better way for our university to tap into the global community of scholars related to energy and environment," Holloway said. "This connection will benefit our current students – as it has done for me and so many others - and it will help us recruit on an international scale."

Foell is thrilled to see his gift help students and faculty to expand the Wisconsin Idea and increase collaboration across the world.

"With this partnership, the UW will have opportunities to internationalize its research in areas where its work is primarily domestic. IIASA will gain access to scientists and research in the broad spectrum of disciplines at a premier U.S. research university and potentially strengthen its relationship with other important U.S. institutions," Foell said. "I believe the partnership also has the potential, nationally and globally, to contribute to the important role of science in diplomacy and international understanding. IIASA projects played an important role in this respect in the cold war in the 70s and 80s. Despite current increasing tension among some major countries, this project can help keep open and nurture scientific channels, particularly in areas such as climate and environment."

Holloway and Nemet are grateful to the Foell family for their support of this partnership and all that Foell has done to help EAP over the past few decades.

"The generous support of Wes and Ankie Foell provides funding to support new collaborations, for example supporting the travel costs of a UW professor to visit IIASA, give a talk, and grow connections that can benefit our classes, our students, and the international reputation of the EAP program," Holloway said.

Nemet added, "I know that IIASA has been important to the Foells and we are all grateful for their support of expanding the collaboration and enabling students and young researchers to visit each other's institutions."

Thomas Yuill honored by University of Guadalajara for career achievements

By Rachel Carrier

Former Nelson Institute for Environmental Studies Professor and Director Emeritus Thomas Yuill was recognized by University of Guadalajara at the Guadalajara National Book Fair for his scientific career and achievement in environmental sciences. Yuill played a key role in establishing a strong partnership between the Nelson Institute and University of Guadalajara.

Yuill influenced many research projects and created the Intermunicipal Board for the Management of the Lower Ayuquila River Basin, a project that paved the way for many similar management structures on a national scale. Yuill is celebrated by both the University of Guadalajara and the Nelson Institute for his passion and dedication to linking the institutions for many years.

Ricardo Villanueva Lomeli, General Rector of the University of Guadalajara, recognized Yuill this year for his outstanding scientific career and study of zoonoses, public health, and biology.

"We have to break down the barriers between disciplines. Conservation of nature requires it, and it is also a good opportunity for our Wisconsin students to learn about the tropical elements that are extremely important," Yuill said. "I am grateful for the collaboration and friendship with University of Guadalajara"

Lilia Victoria Oliver Sanchez, rector of University of South Coast in Autlán, Mexico, said "Dr. Yuill is a specialist in the study of zoonosis, he has been a visiting professor at University of Guadalajara for years. This is a deserved tribute to the academic career of a great and old friend of University of Guadalajara."

"We have to break down the barriers between disciplines. Conservation of nature requires it, and it is also a good opportunity for our Wisconsin students to learn about the tropical elements that are extremely important."

– Tom Yuill

Thomas Yuill receiving his award. Photo credit: Fernanda Velázquez, University of Guadalajara Gazette

Thomas Yuill. Photo credit: Fernanda Velázquez, University of Guadalajara Gazette

Maria Magdalena Ramirez, a researcher at University of South Coast, shared highlights from the honoree's career, including his direction of 42 doctoral theses, 117 articles in scientific journals, and 40 book chapters.

The original story was published in early December by the University of Guadalajara Gazette and is available here in Spanish.

Learn more about Thomas Yuill and his involvement with the Nelson Institute.

Tales from Planet Earth Film Series features the film, *Breaking Trail*

By Bekah McBride

Explore Emily Ford's experience as the first woman and person of color to embark on a thru-hike of the Ice Age Trail in winter during the Nelson Institute Tales from Planet Earth Film series screening and discussion of *Breaking Trail*. This special event will include an opportunity to screen the film on February 7 from 7-8:30 p.m. at the UW South Madison Partnership and February 8 from 7-8:30 p.m. at the Marquee Theater on the University of Wisconsin-Madison campus.

Diggins and Ford taking a break in the sun.
Photo credit: Emily Ford

The event will feature a special conversation with Ford and Nelson Institute community partnership liaison, James Edward Mills, who will discuss Ford's journey with her sled dog Diggins and the ways this experience tested their endurance, while also showcasing the unexpected kindness of strangers.

"I hope it helps pave the path for others to unabashedly go out and seek their own adventures. No matter who they are or what they look like," Ford said of her mission to share this story. "Everyone has a dream - it may not be hiking 1200 miles in the winter - but it's something I hope [will help] other folks feel empowered to blaze their own path."

Ford, who has become well-known for breaking barriers and strongly supporting initiatives that make the outdoors more accessible for all, says she did not set out to become an icon.

"I just wanted to do a long hike. I am laid off December to February so that's the time I have to do anything like that. I was hoping to become a thousand miler," Ford shared.

In fact, Ford says she originally set out to connect with nature.

"I love noticing what nature is doing," Ford said. "When I spend enough consecutive days outside, I start to notice what the little dudes are doing in nature (i.e., insects, rodents, plants, and the movement of water) because they make up the big scene. I love the patterns that can be found out in the wild. Seasons are beautiful and nature follows those patterns and does what it needs to do. I want to hone that skill in my life."

While Ford was focused on her connection with nature, she wasn't alone. Her trail companion, a borrowed sled dog named Diggins, provided her support and assistance with the long trek.

"Ah Diggins, she's my girl," said Ford. "She was always a good check in on the trip. I think that as animals, humans do better if we have something to take care of. Having her to think of helped me not make too many bad [or] risky choices and be mindful of my physical [and] metal health... She's also a great puller. I do want to be clear that she didn't drag me across Wisconsin, but she definitely helped! We became best friends, she's the best girl."

Diggins "breaking trail" on a snowy day. Photo credit: Emily Ford

> ***"I hope it helps pave the path for others to unabashedly go out and seek their own adventures. No matter who they are or what they look like."***
>
> **–Emily Ford**

Ford on a frigid day on the trail. Here she is experiencing a temperature of -17 degrees Fahrenheit. Photo credit: Emily Ford

In addition to Diggins, Ford was also joined virtually by her many social media followers who were supporting her journey and cheering her on from afar. As she shared her experience on social media, Ford began to see that her personal goals of connecting with nature and challenging herself had started to inspire others. By mile 500, Ford received a message from Jesse Roesler, a documentarian interested in filming Ford's experience.

"Jesse sent me a message on Instagram and I took some time on a zero day to think about if I wanted to say yes. Like most things in my life, I figured a "yes" wouldn't hurt," Ford said. "The story is about me and Diggins and our trek across Wisconsin in the middle of the pandemic and a bit after George Floyd's murder. He [Roesler] pushed out the message that I firmly believe in which is everyone deserves to feel safe in the outdoors and the outdoors is for everybody."

This message is what Ford hopes her film, which premiered at the Banff Film Festival, and events like Tales from Planet Earth will bring to others.

"It's important," said Ford. "Every person is important and we as a collective are important. That includes everything under the sun."

Learn more about this event and related partner events, and register here.

Join the Thriving Earth Exchange's Wisconsin cohort

By Abby Becker

The University of Wisconsin-Madison's UniverCity Alliance and American Geophysical Union (AGU) Thriving Earth Exchange are looking for Wisconsin communities to work with on their geotechnical projects. This free opportunity connects communities with scientists and experts as they work to solve local challenges related to natural hazards, natural resources, and climate change.

AGU THRIVING EARTH EXCHANGE

Community science and research happens when communities and experts work together to advance the community's priorities. That includes defining questions, designing protocols, collecting and analyzing data, communicating learnings, and using scientific knowledge in decision-making. Projects begin with community voice, are guided by community knowledge, and end in community impact.

How to participate in the April 2022 Wisconsin cohort:

#1: Help us find projects in Wisconsin communities. Project design starts with leaders who represent their community. Thriving Earth has worked with local or regional governments, tribal governments, community-based organizations, grassroots organizations and other advocacy or non-profit groups. We match community leads with a Community Science Fellow, who works to identify scientists and experts to join the team. Apply by March 1 to join the April 2022 community science project cohort.

#2: Help us find people who can manage the projects. Volunteer Fellows are the glue that holds the project team together by serving as project managers, facilitators, and connectors. They represent cohort of people from all backgrounds and career stages interested in growing their practice of community science while guiding a project from idea to impact. Apply by March 1 to be a Community Science Fellow.

Learn more

Interested Wisconsin-based communities and volunteers can contact: Gavin Luter, gavin@cows.org or 608-261-1141, to get involved! Past examples of Thriving Earth Exchange projects can be found in this database.



Photos courtesy of AGU Thriving Earth Exchange.

Andrea Hicks

Ask Andrea

A monthly column from Andrea Hicks, Director of Sustainability Education and Research, an assistant professor in the Department of Civil and Environmental Engineering, and the Hanson Family Fellow in Sustainability

January, with the start of the new calendar year, has always felt like an opportune time to reflect on achievements from the previous year and to set the tone for the one to follow. It has been twelve months since I began my role as Director of Education and Research at the Office of Sustainability, first at an interim level and now as non-interim. Even in that short time the Office has changed and grown. We have moved from our beloved Henry Mall location over to North Park St., where we are now united with the rest of our Office of Sustainability colleagues from the Facilities Planning & Management. We debuted our first campus-level (student, staff, and faculty) sustainability survey, which will help us chart our future plans and mission. Our intern program is thriving in challenging times and we are looking forward to all that is to come for current and future cohorts. The Green Fund continues to make our campus more sustainable through its student-led projects. We are educating more students than ever before in our undergraduate sustainability certificate.

There are also many things to be excited for in this new year. An electric food truck will soon be cruising around campus, thanks to cooperation between the Green Fund, University Housing, and Madison Gas and Electric. A course that is using "campus as a living laboratory" has been evaluating the environmental impacts of different takeout containers to be used by the electric food truck, representing a truly educational sustainability effort. We are also working to broaden the sustainability credentialing and course offerings for our undergraduate and graduate students here at UW–Madison, in order to respond to the growing student and employer demand. Commencement is going green this year: graduating students for the winter commencement had the opportunity to take a sustainability pledge to help guide their future endeavors and picked up a green ribbon from the University Book Store to signal their sustainability commitment. In addition, our interns are actively working with the commencement planning group to reduce the environmental footprint of our celebrations!

At the Office of Sustainability, we have built a firm foundation with our core programs from which to grow our future endeavors. We have an exciting year ahead of us and we look forward to welcoming you on our journey!

Jonathan Patz. Photo credit: Catherine Goslin

Jonathan Patz to step down as GHI director to focus on climate change

By Bekah McBride

Nelson Institute affiliate Jonathan Patz will be stepping down as director of the Global Health Institute at the University of Wisconsin-Madison in July 2022 to focus more on climate change and planetary health.

Patz is currently director of the Global Health Institute at the University of Wisconsin-Madison, the Tony McMichael Professor, and the John P. Holton Chair of Health and the Environment with appointments in the Nelson Institute for Environmental Studies and the Department of Population Health Sciences.

> *"With growing evidence that the climate crisis poses a public health emergency, it's time for me to refocus all of my scholarship on this existential threat."*
>
> – Jonathan Patz

Patz is well known for his leadership on the United Nations Intergovernmental Panel on Climate Change (or IPCC) which shared the 2007 Nobel Peace Prize with Al Gore. Patz is also involved in a variety of initiatives and research projects on campus.

"With growing evidence that the climate crisis poses a public health emergency, it's time for me to refocus all of my scholarship on this existential threat," said Patz. "After all, our collaborative research thus far shows that climate solutions offer enormous human health and economic benefits."

The search for a new director has been initiated.
Read more

Jonathan Patz presents on climate change and health

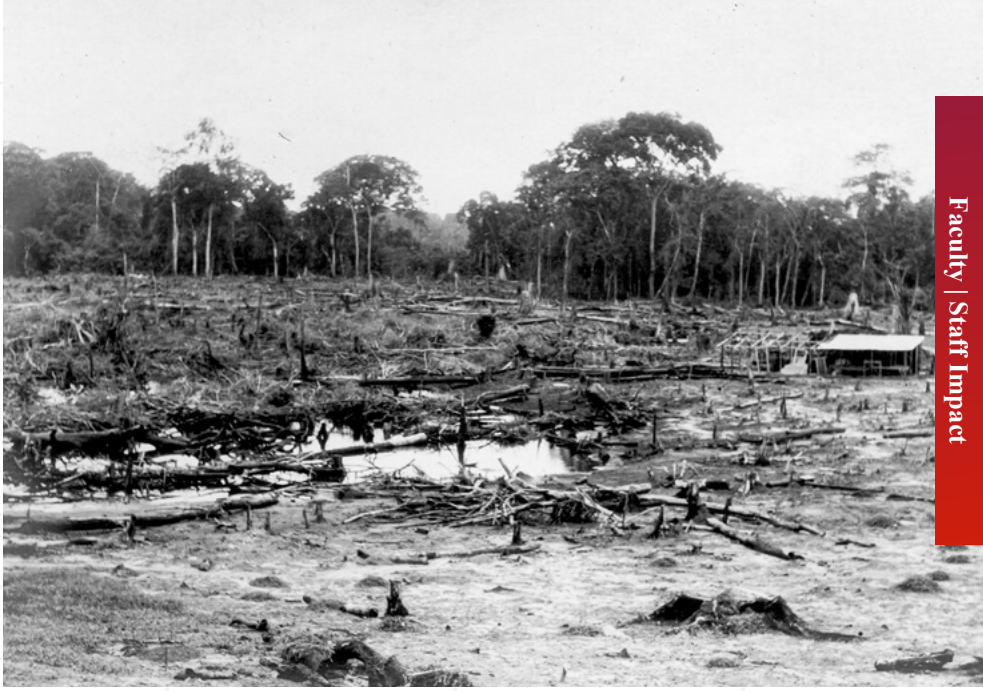
By Bekah McBride

On December 15, Nelson Institute professor Jonathan Patz presented on the link between climate change and health at a University of Pittsburg Pitt Public Health seminar.

Patz, who is the director of the Global Health Institute at the University of Wisconsin-Madison, Tony McMichael Professor, and the John P. Holton Chair of Health and the Environment, has a spent much of his career studying these connections. In fact, he has contributed to over 200 scientific papers on the topic, and he served as a lead author for the United Nations Intergovernmental Panel on Climate Change (or IPCC), an organization that shared the 2007 Nobel Peace Prize.

During the presentation, Patz highlighted the ways in which climate change impacts such as extreme heat and flooding are affecting human health. He also discussed zoonotic disease and how climate change can increase opportunities for these diseases to spill over into humans. Additionally, Patz outlined the economic impact of these health concerns, showcasing why addressing climate change is good for both physical and financial health.
View the presentation

Gregg Mitman's new book highlights land use, racial injustice, and America's shared history with Liberia



The Firestone Plantations Company cut and burned the rainforest to make way for the planting of rubber tree seedlings. Image by Loring Whitman, 1926. Courtesy of Indiana University Libraries.

By Bekah McBride

Nearly 6,000 miles separates the United States and the West African country of Liberia, but their histories are forever intertwined. In fact, Nelson Institute affiliate Gregg Mitman, who also serves as the Vilas Research and William Coleman Professor of History of Science, Medical History, and Environmental Studies at the University of Wisconsin-Madison, says that to better understand the history of racial injustice and exploitation in America one must also understand Liberia's history. Through his new book, *Empire of Rubber: Firestone's Scramble for Land and Power in Liberia*, Mitman explores this history, specifically looking at the ways in which the Firestone plantations in Liberia impacted, and continue to impact land use, the environment, the economy, and racial injustice in both countries.

Mitman became interested in this unique shared history when he unearthed footage from a 1926 Harvard expedition to Liberia, which completed an extensive biological and medical survey of Liberia.

"As a historian of science, medicine, and the environment, I became intrigued by the purpose of this Harvard venture," Mitman shared. "I thought I was going to write a book about the history of American biomedical research in Liberia, but as we started traveling and interviewing people about the film footage and photographs, Liberians we spoke to were less interested in the biomedical aspects, and were more focused on questions of land dispossession."

As Mitman reviewed the film, he discovered that the expedition took place during a time when Firestone, an American tire and rubber company founded by Harvey Firestone in 1900, was negotiating with the Liberian government for a lease of up to one million acres of land to grow rubber trees.

"I learned Harvey Firestone gave $20,000 to publish the expedition account," Mitman said. "The corporate backing of a Harvard scientific expedition raised questions about the role of American science and medicine in the expansion of the American corporate empire across the world. And that led to writing this book about the history of Firestone in Liberia."

Mitman's research in this area became an expansive project that embraced many collaborators, including Nelson Institute alumnus and Liberian, Emmanuel Urey who has extensive experience with land rights throughout Liberia. This collaboration would serve as a catalyst for a variety of projects that outline the impact of the Firestone plantations on both Liberian and American history.

However, the story of Firestone in Liberia begins long before the company, or the 1926 expedition, arrived. Characterized by a mix of coastal plains, tropical rainforests and semi-deciduous forests, the West African area that would become Liberia had been inhabited for centuries by a number of indigenous peoples. In 1816, a group of prominent white abolitionists and slaveholders in the United States formed the American Colonization Society (ACS) to support the establishment of a colony in West Africa for the resettlement of free Blacks living in America, many of whom had previously been enslaved. The settlers brought a Western system of private property ownership alien to the customary practices and cultural beliefs of the area's indigenous inhabitants. To "sell" or "buy" land was not a widely held West

African concept. Chiefs were the custodians, not the owners, of the land. Land was instead held in common by the community. Although Liberia eventually became the first African republic to declare its independence, these different relationships to land continue to impact lives and livelihoods in Liberia.

"That focus on the meaning and values of land is an important element of the book," Mitman said. "When we talked to people about the meaning and importance of the 1926 Firestone concession today, people would point to the issue of land dispossession."

Mitman breaks ground for a new school in Gomue, Liberia, Emmanuel Urey's village, where a counter-plantation model of development is underway. Photo credit: Emmanuel Urey.

"One of the things I think is important, particularly for American readers, is for them to understand the historical importance of Liberia to the United States and how integral Liberia is to U.S. history in this moment when there is a lot of discussion around the reckoning of racial injustice."

– Gregg Mitman

Mitman explained that in 2018, about 50 percent of land in Liberia had been leased long-term to companies in the rubber, oil palm, mining, and timber industries.

He added, "If you dig deeper, some of these concessions for oil palm were built on the concession of a former rubber concession. So, you find these historical layers of concession upon concession going back to Firestone."

These concessions and the impact of land dispossession are not only highlighted in *Empire of Rubber*, but they are also the basis for Mitman and collaborator Sarita Siegel's 2016 film, *The Land Beneath our Feet*, which follows then Nelson Institute student Emmanuel Urey as he returns to his home in Liberia to share the Firestone footage with his community and discuss how the Firestone concession shaped land rights in Liberia.

Urey, who studied Environment and Resources at the Nelson Institute, was focusing his research on land rights and also working as a consultant to the Land Authority in Liberia when he met Mitman. At the time, the Land Authority, a government-sponsored commission, was working to develop a series of land reform recommendations that would reduce land conflicts in Liberia and give legal recognition to customary rights to land for the first time in the country's history. The film, and Urey's work with the Land Authority and civil society organizations committed to land reform, helped lead to the passage of the Land Rights Act in 2018. The Land Rights Act explicitly recognizes the customary land rights of millions of rural Liberians and is regarded as one of the most progressive land reform laws on the African continent.

Mitman is grateful for Urey's experience with Liberian land rights. Urey's expertise not only ben-

Mitman and Siegel filming Urey on the Du River, an important transportation corridor for Firestone in the early years of its operations in Liberia. Photo credit: James Weegi.

efitted his community, but his insight and perspective helped Mitman to better understand the impact of Firestone and other land challenges in Liberia.

"One of the things that was so important in traveling though Liberia with Emmanuel is that he helped me to understand the different meanings of land and conflicts over land rights in Liberia," said Mitman. Through Mitman and Urey's interactions with local people in Liberia, Mitman came to better understand the implications of a plantation land grab. "The first act in the making of a plantation world is land dispossession. And that was the case in Firestone's establishment of what would become the largest contiguous rubber plantation in the world."

Mitman's book explores not only land dispossessions but also the culture of a plantation and how this large-scale system of monocrop agriculture endures.

"We often think about plantations as in the past. We associate them with the era of slavery. But the plantation as a particular formation of capital, land, and labor designed to produce monoculture crops that are turned into profitable commodities is still alive and well," Mitman said. "It exists throughout the world, most evident today, for example, in the form of large oil palm plantations in Liberia and Southeast Asia. Although no longer dependent on unfree labor, the industrial plantation of today has elements of land dispossession, labor exploitation, wealth extraction, and environmental decimation inherent in its past iterations."

Mitman said his book also explores how this plantation methodology impacts the environment and what we can learn from our past to help us adjust for a better future.

"I write about the industrial ecologies of the plantation. How does this particular amalgamation of people, plants, land, and inputs—because you need pesticides and fungicides to support this monoculture crop—impact workers and those living in the surrounding area. The relationships and structures of plantation life differentially affect people working on the plantation in terms of toxic exposures, wages, and medical treatments. Plantations also create conditions of possibility for certain diseases to arise."

For example, Mitman shared that river blindness, a parasitic disease that involves a blackfly, flourishes when rainforest is destroyed, and rubber trees are planted in their place. He said, this, along with a large labor population, creates a habitat where a biting blackfly and the parasite thrive, making river blindness endemic in areas of Liberia.

Mitman also discusses plantation labor and the medical and social treatment of these workers.

"That's another dimension of the book. The way in which Firestone exported Jim Crow policies to Liberia and the kind of racial logics that went into the structure of the plantations," Mitman said. "At their peak in the late 1940s, the Firestone plantations had 30,000 Liberians working under 120 white managers. So, you have this racialized system of labor."

Mitman continued, "One of the things I think is important, particularly for American readers, is for them to understand the historical importance of Liberia to the United States and how integral Liberia is to U.S. history in this moment when there is a lot of discussion around the reckoning of racial injustice. Even the founding of Liberia is an important dimension to understanding the history of racial inequality and oppression in America."

Zuzana Buřivalová receives Nature Award for Driving Global Impact

Buřivalová (right) conducting field work in Borneo reviews forestry management plan maps with collaborators from The Nature Conservancy Indonesia. Photo credit: Justine Hausheer, The Nature Conservancy

By Bekah McBride

Nelson Institute Center for Sustainability and the Global Environment (SAGE) and Department of Forest & Wildlife Ecology assistant professor, Zuzana Buřivalová is the 2021 recipient of the Nature Award for Driving Global Impact (DGI). This award, which includes a $30,000 prize, recognizes Buřivalová's efforts to further biodiversity protection in tropical forests.

"We are proud of Zuzana's trailblazing work, for its ingenuity and commitment as well as its impact," said associate scientist and the director of SAGE, Carol Barford.

Buřivalová, is the principal investigator for the Sound Forest Lab at the University of Wisconsin–Madison and has focused much of her research on soundscapes, which is defined as a sound or combination of sounds that forms or arises from an immersive environment. Through her research, Buřivalová is working to better understand how human behavior is impacting biodiversity within tropical rainforests.

According to Buřivalová, about half of all terrestrial species can be found in tropical forests, so gaining a greater understanding of how these species are being impacted will be a positive step toward the conservation of biodiversity. Buřivalová is also interested in using soundscapes to learn which conservation strategies succeed and fail in tropical forest conservation, and where traditional field methods are not sufficient.

Additionally, Buřivalová recently published the online children's book *What does the rainforest sound like? A Sound Forest Lab Story*. This book includes detailed illustrations and the accompanying sounds of common as well as rare animals heard throughout the Borneo rainforest. Meant to be an eye-catching and ear-catching, educational tool, the book is ideal for ages six to 12, but will capture the attention of anyone interested in the sights and sounds of the rainforest.

Zuzana Buřivalová. Photo credit: Todd Brown, Media Solutions, University of Wisconsin-Madison

"I am honored and humbled to have been selected for the award," said Buřivalová. "I work on biodiversity conservation in tropical forests, and this award comes at a very opportune moment. The COP climate summit in Glasgow just finished earlier this month, and it's clear that nature-based climate solutions are an important way forward. With this award I will research how we can work towards tropical forests that not only lock in carbon, but that are also able to serve communities and support the rich biodiversity. I would also like to express gratitude to all my mentors as well as both my departments for supporting me and my lab's applied conservation work."

Andrea Hicks awarded Laudise Medal

By Bekah McBride

Andrea Hicks

The 2021 Laudise Medal from the International Society for Industrial Ecology has been awarded to Andrea Hicks, who serves as a Nelson Institute affiliate, director of Sustainability Education and Research, Hanson Family Fellow in Sustainability, and associate professor of Civil and Environmental Engineering.

The award recognizes Hicks's outstanding achievements in the field of industrial ecology, which includes her research into life cycle assessments and the long-term environmental impact of various systems, products, and processes. Her research also explores the environmental impacts and sustainability implications of emerging technologies such as engineered nanomaterials, autonomous vehicles, and aquaponics.

"Industrial ecology is often called the 'science of sustainability' and seeks to study the flow of energy and materials through industrial systems in order to make them function more like natural systems," shared Hicks. "I am deeply honored to have been selected for this award in recognition of my work."

Hicks also works on a wide range of sustainability initiatives across campus and teaches several courses including 421 Environmental Sustainability Engineering, which is a community-based learning class. Community-based learning is a major focus for Hicks and her efforts in this area were recognized when she was awarded the 2020 University of Wisconsin Chancellor's Excellence in Community-Based Learning Teaching Award.

Tyler Lark's research showcases the importance of grassland

Tyler Lark

By Bekah McBride

Recent research from Nelson Institute Center for Sustainability and the Global Environment (SAGE) scientist Tyler Lark has become a catalyst for conversations about the importance of protecting grassland.

Lark, who has spent years researching U.S. agricultural land-use change and its impacts on the nation's land and water resources, has published numerous studies showcasing the many benefits of grassland. From providing habitat for a variety of animals to helping to store carbon, grassland provides benefits for humans, animals, and the planet. Lark notes, however, that grassland is disappearing and that this will have a significant impact on the environment.

Learn more in these articles from *The Guardian* and the *StarTribune* which feature insight from Lark.

Tracey Holloway leads health benefits of clean energy project

By Anica Graney

Can clean energy solutions like solar power and electric cars help us breathe easier? New research at the University of Wisconsin—Madison shows how our energy choices can benefit public health, from longer life expectancies to fewer kids have checking into the emergency room with respiratory issues. Led by Professor Tracey Holloway and her group in the Nelson Institute Center for Sustainability and the Global Environment (SAGE), this new initiative quantifies win-win situations for public health, the air we breathe, and the global climate.

Tracey Holloway. Photo credit: The Holloway Group

Professor Holloway has spent nearly twenty years at the Nelson Institute for Environmental Studies and the Department of Atmospheric and Ocean Sciences researching the effects of air quality and its relation to energy, climate, and public health. Now, she is partnering with energy and environmental non-profits in the upper Midwest, to "identify policies focused on state-wide carbon reduction goals and assess changes in energy use and emissions."

The goal of this initiative is to quantify how clean energy policies can benefit local air quality and health, as well as greenhouse gas emissions affecting the global climate. "Air pollution is the strongest link between energy systems and public health, and that's because most of our energy comes from fossil fuel burning," said Holloway. "Some of these gasses affect climate like carbon dioxide, but many of the others affect health. They lead to asthma attacks, cardiac disease, or decreased life expectancy."

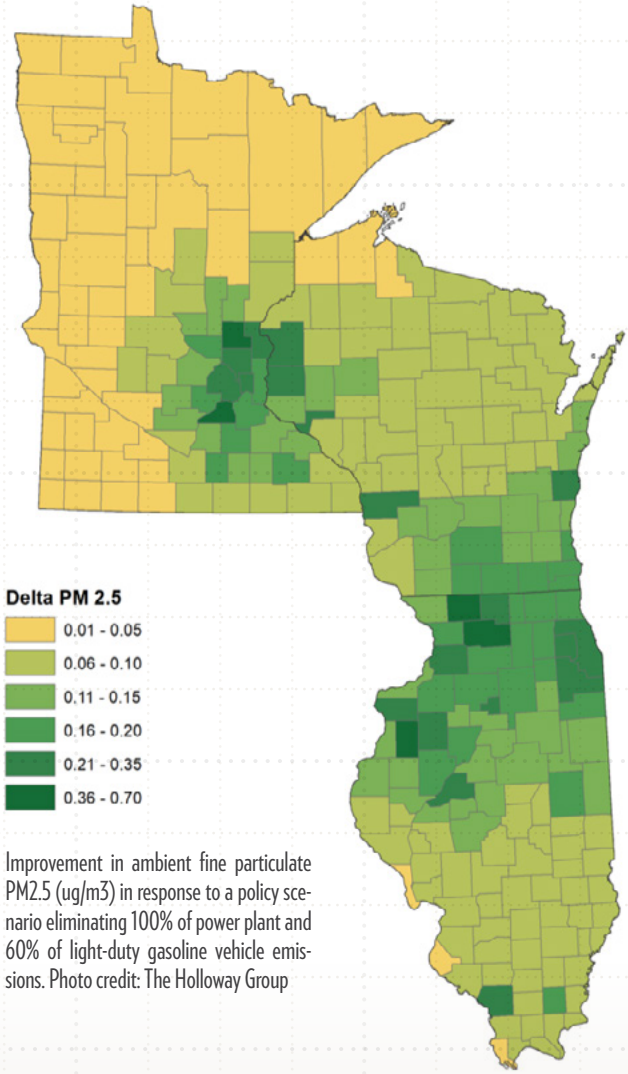
Through funding provided by the Joyce Foundation and the McKnight Foundation, Holloway works with a team including Dr. Paul Meier, Nelson Institute PhD student Ciaran Gallagher, Nelson Institute M.S. student Xinran Wen, and undergraduates in a style that Holloway describes as a mix between a traditional research lab and a small consulting company. "We work with partners on time-sensitive analysis, so we need to be to nimble and responsive," says Holloway.

The team evaluates air quality and health outcomes of proposed and current policies in Wisconsin, Illinois, and Minnesota, with measurements and models, especially those developed at the U.S. Environmental Protection Agency to support air quality planning and management. From simple screening tools to state-of-the-art mathematical models, Holloway and her colleagues analyze the factors that go into air quality

Left to right: Paul Meier, Ciaran Gallagher, and Xinran Wen. Photo credit: The Holloway Group

and share their results via presentations and reports with state agencies, regulators, and public-interest stakeholders.

One of their projects evaluates the air quality and health benefits of electric vehicles to reduce the burning of fossil fuels in passenger vehicles. "If we clean up our vehicles, we see cleaner air in cities where cars and trucks are a larger source of pollution. We receive those health benefits, and they occur immediately. You don't have to wait ten years to experience the rewards of clean energy," said Holloway. Electric vehicles also expand options for how that energy is generated including alternatives like solar or wind power.



Improvement in ambient fine particulate PM2.5 (ug/m3) in response to a policy scenario eliminating 100% of power plant and 60% of light-duty gasoline vehicle emissions. Photo credit: The Holloway Group

Holloway says that the switch to electric vehicles also opens up economic opportunities for states like Wisconsin that don't mine for coal, drill for oil, and have no natural gas. "All the fossil fuels we use in Wisconsin are being imported from other states. So, there's potential economic benefits from keeping those resources in-state to grow our own economic opportunities."

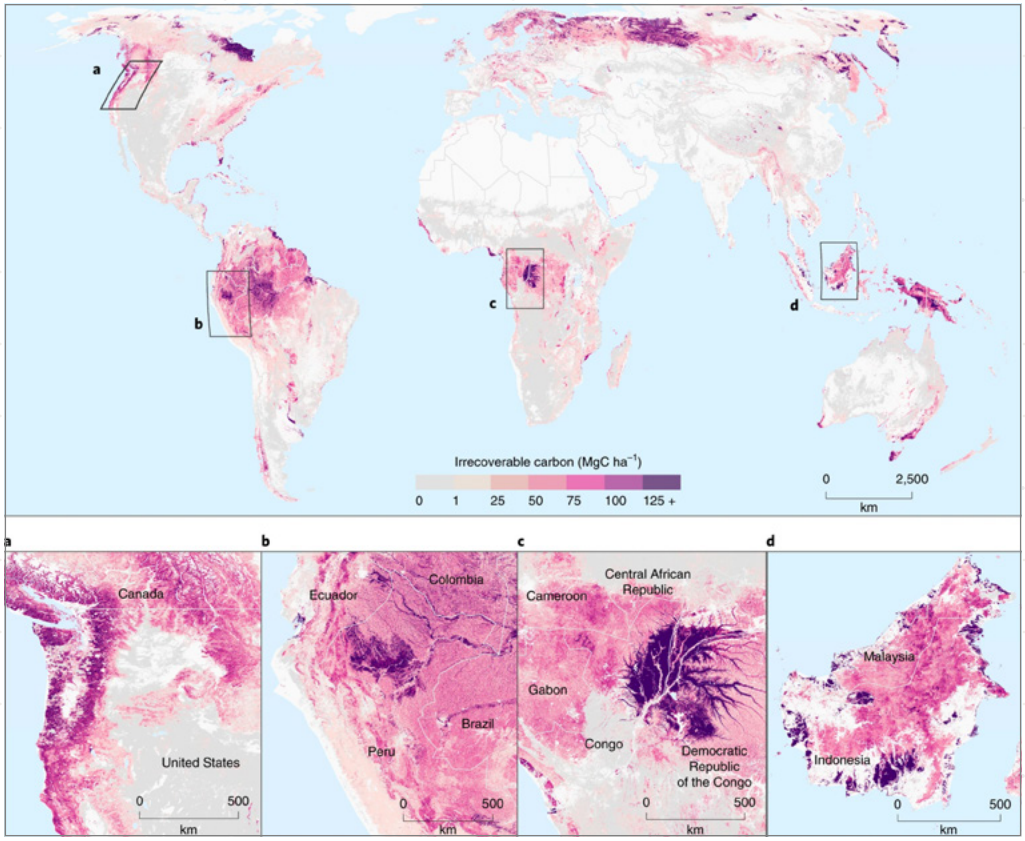
Additionally, the changes the Midwest makes to decrease carbon emissions will have a global impact. "From a climate perspective, the Midwest is one of the largest carbon emitters in the United States," said Holloway. "We're a center for industry and electricity generation so we matter in terms of what our policies are doing. They're really impactful on a national stage."

> ***"We're a center for industry and electricity generation so we matter in terms of what our policies are doing. They're really impactful on a national stage."***
>
> – Tracey Holloway

The Holloway Group also quantifies the impact of clean energy policies on communities that have suffered the most from poor air quality. "Historically, people of color and under-represented minorities have been disproportionately affected by industrial, transportation, and other air pollution that has known adverse effects on health," said Holloway. "So, as we're thinking of new solutions, we want to make sure that the solutions being proposed are not furthering those historic inequities."

Learn more about the health benefits of the clean energy project on the Holloway Group's website.

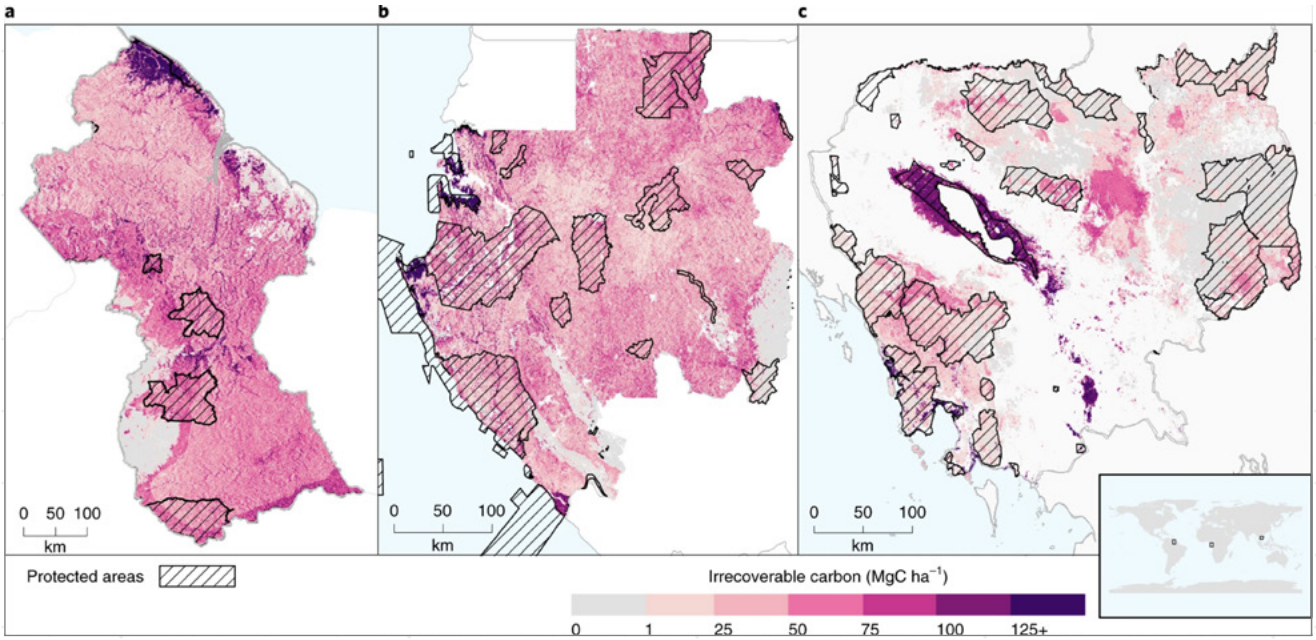
Member of Nelson Institute lab helps to map the world's 'irrecoverable' carbon



a–d, Inlays show areas of high irrecoverable carbon density in the Pacific Northwest of North America (a), western South America (b), the Congo Basin (c) and the island of Borneo (d). Areas with zero irrecoverable carbon are displayed in grey to demonstrate the footprint of global manageable carbon. Photo credit: Nature Sustainability

By Bekah McBride

Tropical forests of the Amazon and temperate forests of northwestern North America are just a few of the Earth's ecosystems that contain climate-critical stores of carbon. They withhold large amounts carbon from the atmosphere that has been identified as irrecoverable; that is, carbon that is vulnerable to release from human activity and, if lost, could not be restored by 2050 — when the world must reach net-zero emissions to avoid the worst impacts of climate change. This concept was first proposed in a 2020 paper involving scientists from the University of Wisconsin-Madison and this November, they followed up that report with a paper mapping all irrecoverable carbon.



a-c, Illustrative examples of the spatial relationship between irrecoverable carbon and PAs in Guyana (a) for which 10.4% of irrecoverable carbon by mass lies in PAs, Gabon (b) (23.2%) and Cambodia (c) (42.3%). Photo credit: Nature Sustainability

Published in *Nature Sustainability* the map and accompanying paper was led by scientists at Conservation International along with UW-Madison graduate research assistant, Seth Spawn-Lee. A member of the Gibbs Land Use and Environment Lab within the Nelson Institute Center for Sustainability and the Environment (SAGE), Spawn-Lee's research works to better understand the environmental and earth-system impacts of land-use change.

The irrecoverable carbon mapping project is an extension of Spawn-Lee's previous work mapping the carbon stored in the world's plants and assessing how those stores are effected by land use changes, such as when a forest is converted for agriculture or another use.

"Land use change is one of the main sources of climate-warming greenhouse gas emissions—second only to fossil fuel burning," said Spawn-Lee. "The 'irrecoverable carbon' concept is meant to help prioritize conservation efforts aimed at reducing these emissions."

Among the key findings of this paper is that 75 percent of Earth's irrecoverable carbon and habitat for 91 percent of the Earth's terrestrial vertebrate species can be found in less than 14 percent of Earth's land. This showcases the immediate need to protect this land.

As such, the report offers recommendations for supporting the management of this land. These recommendations include supporting Indigenous peoples and communities, who manage more than a third of Earth's irrecoverable carbon, reversing policies and practices that threaten Earth's last remaining irrecoverable carbon reserves, and designing comprehensive and collaborative land use planning practices that promote sustainable development and climate change resilience.

"Right now, countries the world over are pledging to protect as much as 30 percent of the earth's land area by 2030 in hopes of preserving both biodiversity and a habitable climate," said Spawn-Lee. "Our map can inform these efforts by identifying the places we simply can't afford to lose and that urgently deserve uncompromising protections."

"Land use change is one of the main sources of climate-warming greenhouse gas emissions–second only to fossil fuel burning," said Spawn-Lee. "The 'irrecoverable carbon' concept is meant to help prioritize conservation efforts aimed at reducing these emissions."

– Spawn-Lee

COMPETING AND CONSERVING:

UW-Madison rower finds opportunities through environmental studies major

By Anica Graney

As a rower for the University of Wisconsin-Madison's women's rowing team, undergraduate student Alexandra Bogner spends a lot of time on Madison's lakes. "I've rowed on both Lake Mendota and Lake Monona and have been able to see the ecological challenges that they face and the cultural impact the lakes have on our society," said Bogner.

From Middleton, Wis., Bogner began rowing in high school and chose to continue her sport into college on the lakes she had already spent countless hours on. Her interest in the outdoors and nature led her to the environmental studies major which she has paired with psychology.

"I came into college with a ton of credits and knew I was probably going to do psychology and environmental studies no matter what," said Bogner. She then added another major in agriculture and applied economics after a friend recommended the area of study along with certificates in public policy and leadership. "It was a pretty natural fit," she said.

"I came into college with a ton of credits and knew I was probably going to do psychology and environmental studies no matter what."

–Alexandra Bogner

Bogner said her two other majors have given her a unique point of view on environmental studies. "It's been interesting because economics is a study of greater human behavior and habits, and psychology is more individualistic. I think both of those play a very interesting role in the perspective of environmental studies and vice versa."

For her environmental studies major, Bogner took Environmental Conservation with Professor of Geography Matt Turner. At the end of the class, students were instructed to write a 15-page research paper. "I had never written something that long before," said Bogner. "I ended up writing it about the Clean Lakes Alliance and why it was an effective non-profit agency and how it promotes cultural change."

Alexandra Bogner

Clean Lakes Alliance is a local non-profit organization that is dedicated to the safeguarding of waterways in the Yahara River Watershed through community awareness and fundraising.

While talking with a neighbor of hers who was on the Clean Lakes Alliance board, Bogner mentioned the research paper she was writing for her Environmental Conservation class. "She asked if she could read it once I was done, so I ended up sending it to her and she forwarded it to the founder of the Clean Lakes Alliance," said Bogner.

After meeting with James Tye, the founder of Clean Lakes Alliance, Bogner was offered an internship with the non-profit and jumped at the opportunity. "I was

Alexandra Bogner (right) volunteering at a Clean Lakes Alliance event with co-worker, fellow teammate, and student in the Nelson Institute, Allison Elli (left). Photo credit: Alexandra Bogner

brought on as a clinical consultant and I developed a youth education project called Billie the Bluegill," said Bogner.

Billie the Bluegill is a fictional character that "lives" in Lake Mendota and helps "guide students, parents, and teachers through lessons that focus on math, reading/writing, and science." Modules are aimed toward third, fourth, and fifth grade students with subjects focused on the water cycle, leaves and lakes, and how agriculture affects waterways.

Following completion of her internship, Bogner was offered a formal position where she works on a variety of projects and helps with annual campaigns, fundraising, and letter writing. "We're even trying to set up a volunteer day with the rowing team to clean up Lakeshore Path," said Bogner. "It's really fun to have things intersect so much."

Once Bogner graduates in the spring of 2023, she plans to attend law school. "I think law school will help provide a really interesting perspective on how to run a nonprofit and give insight into lobbying for environmental protections," said Bogner.

Learn more about the environmental studies major and how you can support the program.

Billie the Bluegill, Clean Lakes Alliance's mascot for learning. Photo credit: Alexandra Bogner

New BOV member **Katherine Gensler** hopes to expand career preparation opportunities

Katherine Gensler

By Bekah McBride

"Nobody had an energy program when I was in school, so I'm glad to see that UW-Madison is investing in the next important round of careers, training students, and having faculty in that arena. I think that's a really good thing."

– Katherine Gensler

Finding the best way to provide electricity while minimizing harm to the environment is an important goal for Nelson Institute Board of Visitors (BOV) member, Katherine Gensler. A University of Wisconsin-Madison alumna and current Vice President of Government Affairs and Marketing for renewable energy company Arevon, Gensler has spent the past two decades promoting policies and technologies that further renewable initiatives. As a BOV member, Gensler hopes to help students follow their own passions and turn their academic achievements into successful careers by providing guidance and a framework for transitioning from school to career.

"I've long been a champion for students and for internships. I've had a lot of mentees over the years who I've helped to get real world job placements," Gensler said. "Academia is great and important, but I find it's hard for faculty and staff to bridge out into the private sector, so that's a place I've put effort to try to take what people do in the classroom and help them find ways to apply it to a job setting outside of academia."

Gensler, who has experience leading strategic engagement, is currently working on a BOV subcommittee that is looking at how Nelson Institute can support students interested in engaging with the private sector. She was also a part of a subcommittee, led by fellow BOV member Carl Korfmacher, that completed a report on what career services the Nelson Institute should

be providing to students. Overall, Gensler said she hopes to help the Nelson Institute define the pathway for students who have interest in entering private sector jobs related to the environment. This includes helping students to identify how to make connections, who to make connections with, and how to leverage the work being done at the university with what is being done in the private sector.

"Nelson has a really strong history and trajectory of connecting with government agencies and the non-profit community, but the third piece of this ecosystem in terms of jobs is the private sector, "Gensler said. "So, when [Nelson Institute Dean] Paul [Robbins] reached out to me to join the Board of Visitors, it was an easy yes, because training the next generation of students who are going to continue the work that I am doing and, far exceed my contributions, is something I want to support."

As an undergraduate student in political science at UW-Madison, Gensler can recall taking courses through the Nelson Institute, which was known as the Institute for Environmental Studies (IES) at the time. She says she enjoyed those courses as well as an internship at a powerplant. Together, these experiences solidified her interest in renewable energy and led her to pursue energy policy. She hopes to contribute to a framework at the Nelson Institute that will support students who are looking for those internship and professional experiences, just like the one she had. She also hopes to share her own professional experiences and do what she can to help students to confidently enter the job market.

"My career has been entirely in energy policy; first for the federal government and then I worked for the national trade association, and now I work for a solar energy company," Gensler said. "All along the way I've been very policy focused and specifically energy policy. Nobody had an energy program when I was in school, so I'm glad to see that UW-Madison is investing in the next important round of careers, training students, and having faculty in that arena. I think that's a really good thing."

— *Support* —
NELSON

Interested in supporting the Nelson Institute? There are many ways to contribute to the Nelson Institute – participating in our events, mentoring our students, providing connections to your personal networks, and making financial gifts. All of these are necessary and important to us and we invite you to invest in our community in the way that makes the most sense to you. Learn more about all of the great academic programs, research centers, and public programs we offer.

Gifts in any amount are needed and appreciated!

Nelson Institute E&R alumna improves global food security through data science

Phalke during field work. Photo credit: Aparna Phalke

By Bekah McBride

Using satellite data to expand sustainable farming is just one of the ways that Nelson Institute alumna Aparna Phalke is helping to improve global food security. As a Research Scientist and Agriculture, Food Security, and Water theme lead at NASA SERVIR in Huntsville, Alabama, Phalke helps developing countries use satellite data to address critical challenges related to food security, climate, and natural disasters. Using the data science skills she gained as a PhD candidate in the Nelson Institute Environment and Resources (ER) program, Phalke identifies advanced technologies and affordable solutions that help farmers and communities to increase food production while properly managing environmental resources.

This is an area of study that is close to Phalke's heart. Growing up on a farm in India, Phalke says she witnessed farm families, including her own, facing challenges that were often brought about by a lack of resources or inequality. This inspired her to pursue a career that would help fellow farm families.

"As a scientist, I strive not only to build advanced technology for sustainable farming but also to make these tools and resources accessible to farmers from every corner of world," said Phalke. "I also want to promote equality and develop the gender sensitive tools to help female farmers around the globe. Beyond the science, I also want to contribute to women empowerment. I have seen many women from rural parts of the world facing challenges for basic needs in their daily routine. I believe awareness and education can help them to understand their strengths and help them to make useful decisions to become independent."

Through her work with the NASA SERVIR program, Phalke is using her expertise in environmental remote sensing to address some of these challenges. In particular, she is leading crop yield monitoring efforts with partners in Eastern and Southern Africa and also Southeast Asia (Mekong region) that will improve local food security. But, Phalke says she would not be able to do this work if it were not for her experience at the Nelson Institute.

"My student experience at the Nelson Institute was

enriching as a researcher, student, and moreover as an empathetic human," Phalke said. "I joined Nelson Institute in fall 2013 as a PhD student in the Environmental and Resources program and started working as a research assistant on NASA and United States Geological Survey (USGS) funded projects to study global food security using satellite data."

Phalke shared that when she joined the Nelson Institute, she immediately felt supported by the community and specifically her advisor Mutlu Özdoğan, an associate professor in Forest & Wildlife Ecology and the Nelson Institute for Environmental Studies.

"In my research assistant tenure, my advisor Mutlu Özdoğan, helped me a lot by improving my research skills and also motivating me to lead the research work efficiently," Phalke said. "I was lead researcher in developing the world's first high-resolution, 30-m scale/field-scale, cropland extent mask product for Europe, the Middle-east, Russia and Central Asia regions. This work is published in highly cited international journals, as a book chapter, as well as published for public access in the NASA LPDAAC system. This work gave me the opportunity to work with well-known and established global leaders and organizations working in global food security analysis and the entire team experience helped me in my career tremendously."

Cropland Area Maps in Central Asia (Boundary of Turkmenistan and Uzbekistan). Photos courtesy of Aparna Phalke

Figure 1a: Satellite data

Figure 1b: Cropland area map (green color represents crop)

Cropland areas mapped using Landsat satellite data located in suburban area of London, UK. Photos courtesy of Aparna Phalke

Figure 2a: Satellite data in suburban area of London, UK

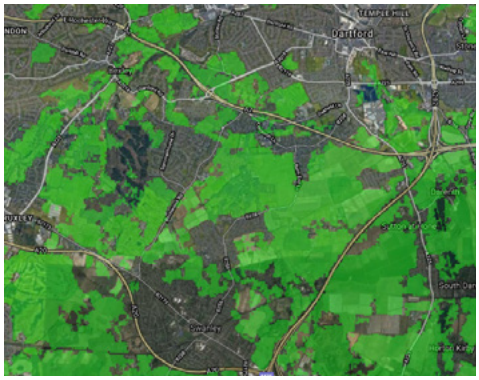


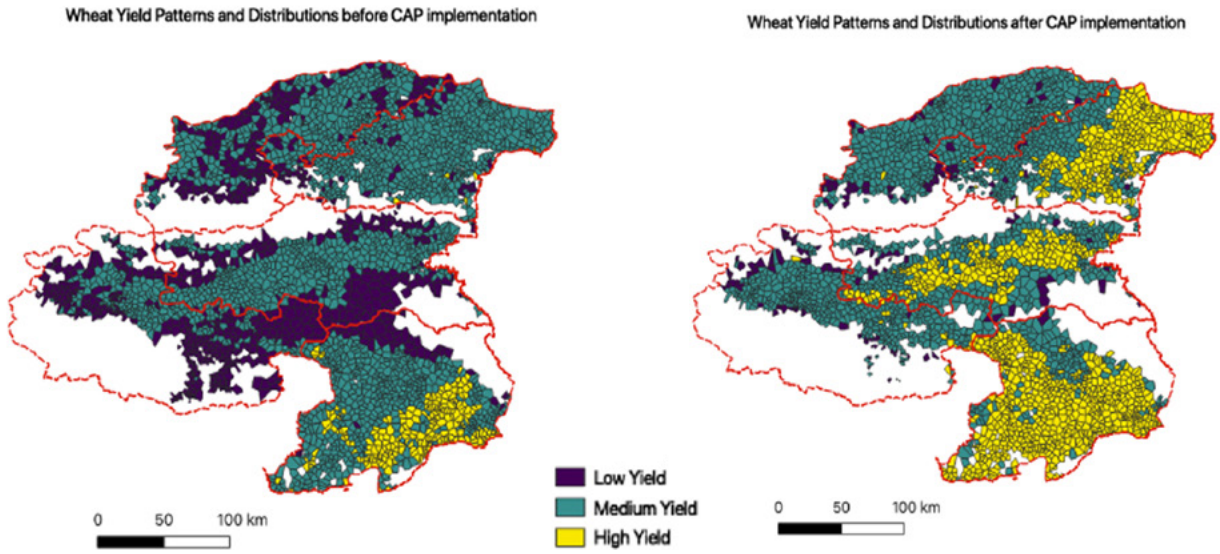
Figure 2b: Cropland area map in suburban area of London, UK

Phalke also extended thanks to her PhD committee which included Özdoğan, Department of Agriculture and Applied Economics professor Jeremy Folz, associate professor of Environmental Studies with the Center for Sustainability & the Global Environment (SAGE) Annemarie Schneider, Department of Forest and Wildlife Ecology professor Philip Townsend, and associate professor at the Space Research and Technology Institute with the Bulgarian Academy of Sciences (SRTI-BAS) Lachezar Filchev. Phalke also noted her appreciation for Prasad Thenkabail, a supervisory research geographer with USGS who served as principal investigator (PI) on her research project.

In addition to her lead research, Phalke was also involved in research studying field-scale cropping parameters through a novel remote sensing tool. Her PhD dissertation research investigated

"As a scientist, I strive not only to build advanced technology for sustainable farming but also to make these tools and resources accessible to farmers from every corner of world."

– Aparna Phalke



Changes in wheat yield patterns and distributions before (left image) and after (right image) implementing common agricultural policies (CAP) in the cross border area of Turkey and Bulgaria. Photos courtesy of Aparna Phalke

the various ways in which remotely sensing observations can improve crop area estimates from individual fields to entire countries and related the estimates to government-led agricultural support programs in the Eastern Mediterranean. Specifically, Phalke looked at how support policies impact agricultural land use changes and policies in the Mediterranean region through econometric modeling, advanced machine learning modeling, and advanced satellite data processing techniques.

Phalke said all of her research was supported by the courses she enrolled in through the Nelson Institute.

"Nelson Institute provided me with the opportunity to enroll into courses on basic and advanced remote sensing, agricultural ecosystems, and socioeconomics which were highly useful for my PhD research. I had opportunity to take coursework from interdisciplinary areas and it helped me in my PhD work where I needed to have knowledge on agronomy, agricultural support policies, remote sensing and geospatial technology, and computer programming," Phalke said. "I enjoyed each and every course and seminar I took. Seminars by Annemarie Schneider, Holly Gibbs, and Philip Townsend had special impression on my work and basic and advanced remote sensing courses on environmental modeling by Mutlu Özdoğan helped me to build a base for my PhD research in algorithm development."

Phalke also shared that her work experience as a teaching assistant and lecturer at the Nelson Institute enhanced her skills in teaching and provided her with the opportunity to work with instructors on curriculum development and teaching activities. She shared a special thank you to Nelson Institute director of International and Professional Programs Nathan Schulfer, Environmental Observations and Informatics coordinator Sarah Graves, Nelson Institute adjunct professor Arlyne Johnson, and associate director of the African Studies program Aleia McCord who helped Phalke to understand teaching and grant writing. She also extends thanks to Nelson Institute senior student services coordinator and graduate advisor Jim Miller.

Phalke now uses these skills to improve global food security and promote equality through her role with NASA SERVIR. Her professional work spans disciplines and continues to create impact globally, but she says she remains grateful for her experience at the Nelson Institute.

"My most meaningful professional accomplishment is my PhD degree completion," Phalke said. "I am super grateful to everyone who supported this and very glad that I was able to contribute to societal welfare through my research."

Learn more about Environment and Resources and how you can support the program.

Breaking Trail movie poster.

Tales from Planet Earth
Film Screening

Join us for a screening and discussion of the film *Breaking Trail*, which follows Emily Ford as she becomes the first woman and person of color to embark on a thru-hike, or point to point, of the Ice Age Trail in winter.
See story page 6

We are excited to host two opportunities to screen the film including a showing at the UW South Madison Partnership location to increase access for our south Madison neighbors.

Monday, February 7
UW South Madison Partnership,
2238 S Park St, Madison, WI 53713

Tuesday, February 8
Marquee Theater, Union South,
UW-Madison Campus, 1308 W Dayton St, Madison, WI 53715

7-8:30 p.m.
Film duration: 30 minutes

Register here

SUSTAINABLE SUCCESS
LECTURE SERIES

The Pathway Forward: How companies, NGOs, and scientists are collaborating to help save the Amazon

We invite you to join us as we discuss a new University of Wisconsin-Madison collaboration that is helping to address deforestation and its links to meat and leather supply chains in the Brazilian Amazon. The collaboration, which bridges public and private sectors, involves researchers at the Nelson Institute Gibbs Land Use and Environment Lab (GLUE) as well as partners at the National Wildlife Federation and Minerva Foods. Together, they are forging a new path forward through the development of VISIPEC, a free, cloud-based supply chain traceability tool that can help companies achieve the goals of their zero-deforestation and sustainability commitments.

Join the developers as they outline how this technology will impact the future of supply chains and deforestation rates. Speakers include Holly Gibbs, Professor, Nelson Institute of Environmental Studies & Geography, UW-Madison, Taciano Custodio, Global Director of Sustainability, Minerva Foods, Simon Hall, Director, Tropical Forests and Agriculture, National Wildlife Federation, and Nathalie Walker, Senior Director, Tropical Forests and Agriculture, National Wildlife Federation.

Thursday, February 24
The H.F. DeLuca Forum Room
Wisconsin Institute of Discovery
Streamed Live and limited in-person seating available
5:30-6:30 p.m. CT

Learn more about the lecture and register here

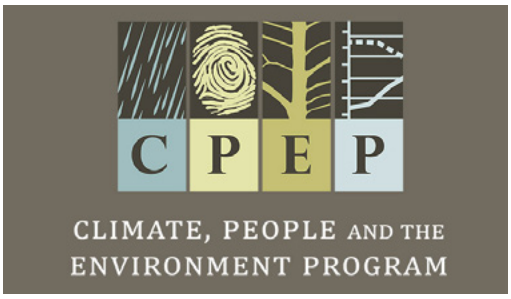
NELSON INSTITUTE
FOR ENVIRONMENTAL STUDIES
EARTH DAY

Save the Date
Water on the Rise
April 21, 2022

The Nelson Institute for Environmental Studies invites you to attend **Earth Day 2022: Water on the Rise**, a day-long community learning event, featuring both in-person and virtual experiences.

Weston Series

The Weston Roundtable Series is designed to promote a robust understanding of sustainability science, engineering, and policy through weekly lectures co-sponsored by the Center for Sustainability and the Global Environment (SAGE), the Department of Civil and Environmental Engineering, and the Office of Sustainability.
Past lecture recordings are available for viewing.



CPEP Series

Each semester the Climate, People, and the Environment Program (CPEP) hosts a weekly seminar featuring lectures by visiting speakers as well as presentations by CPEP faculty, scientists, and students. CPEP seminar presentations are held in conjunction with the Department of Atmospheric and Oceanic Sciences (AOS) and are open to the public. Lectures are held in Room 811, AOS, 1225 W. Dayton Ave. Mark your calendar for these events on Tuesdays from 4-5 p.m. CT
Past lecture recordings are available for viewing.

Tuesday, February 1
Discussion on Tropical Climate Topics
Angel Adames, Asst. Professor, Atmospheric and Oceanic Sciences

Tuesday, February 8
Tying Ecosystems Process to Ecosystem Services
Bill Kleindl, Asst. Research Professor, Montana State University

Tuesday, February 15
Evidence for Increased Waviness of the Northern Hemisphere Wintertime Polar and Subtropical Jets
Jon Martin , Professor, Atmospheric and Oceanic Sciences

Video library of past lectures is available on demand

If you missed a Nelson Institute hosted event or lecture this fall, you can view recordings in our new video library.

Join us

in celebrating the Nelson Institute year-round by purchasing branded merchandise, shirts, sweatshirts, jackets, bags, and more.

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Feedback or questions about *The Commons*, please email: communications@nelson.wisc.edu