Center for Environmental and Animal Protection

2024 ANNUAL REPORT

NYU | ARTS & SCIENCE

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Letter from the Director

Dear Friends and Colleagues,

As I write my first letter as Director of the New York University Center for Environmental and Animal Protection (CEAP), I want to start by expressing my deepest gratitude to Founding Director Dale Jamieson, who retired from the Center in Summer 2024 after retiring from the NYU faculty in Summer 2022.

In addition to being an outstanding scholar, teacher, and mentor for nearly 50 years, Dale has been a prolific program builder at NYU for the past 20 years, playing a central role in establishing not only CEAP but also the Program in Animal Studies and the Department of Environmental Studies, which houses CEAP. He also built bridges across the university and broader community throughout his career, establishing collaborations with a vast network of scholars that continue to shape our multidisciplinary, problem-oriented approach to our work. On behalf of everyone in the CEAP community, I thank Dale for his incredible contributions.

Where will CEAP go from here? In his final year, Dale worked with the Department of Environmental Studies to assemble a wonderful new team to lead CEAP in the next generation. In addition to appointing me as Director, the department appointed Colin Jerolmack (former Chair of Environmental Studies) as Research Director and Jennifer Jacquet (Founding Deputy Director) to the Executive Committee. Other newcomers, including Shelby McClelland (postdoctoral researcher), Adalene Minelli (legal fellow), Audrey Becker (administrator), Sofia Fogel (coordinator), and Toni Sims (researcher) are already making a major difference as well.

Dale Jamieson, Founding Director

Jeff Sebo, Director

Meanwhile, the work continues. In July 2024, CEAP and the Harvard Animal Law & Policy Program jointly released a major report on zoonotic disease risks in live markets across 15 countries and six continents, exposing regulatory shortcomings that increase the

risk of disease spillover. Key findings include predictable patterns of zoonotic outbreaks, insufficient regulation of high-risk human-animal interactions, and opportunities to disrupt disease pathways through policy. The report calls for international collaboration to safeguard health and has received broad coverage in outlets such as *The New York Times* and *USA Today*.

CEAP had many other highlights in 2024 too. Alongside partner programs, we released a detailed report on how local governments can create a safe, resilient, and sustainable infrastructure for humans and nonhumans alike. Members of our community also published articles on topics ranging from the climate impacts of beef production to flower-butterfly protection in Southern China to the value of considering animal welfare and public health in climate policy. Additionally, Dale Jamieson released a new edition of his book on environmental ethics, and CEAP co-hosted a workshop at UC San Diego on the need for new thinking about conservation.

The broader NYU Animal Studies and Environmental Studies community is thriving as well. Since CEAP's launch six years ago, the NYU Department of Environmental Studies has nearly doubled its faculty while creating a number of innovative programs, including the Animal Studies M.A. Program, the Wild Animal Welfare Program, and the Center for Mind, Ethics, and Policy. Our work is highly influential, with coverage in more than 100 media outlets this year alone. And in 2025, the department will launch a world-class Environmental Studies PhD Program and move into a beautiful new space overlooking Washington Square Park.

These developments for our center and community occur at a time when high-quality research on environmental and animal protection is urgently needed. Recent years have seen more frequent and intense disease outbreaks, extreme weather events, and other global threats affecting humans, animals, and the environment. These challenges highlight the importance, difficulty, and interconnectedness of environmental and animal protection. Our team will meet this moment by staying true to our core mission: conducting, supporting, and disseminating rigorous, accessible scholarship for researchers and changemakers alike.

CEAP has a variety of exciting projects planned for 2025 and beyond, including a study on the climate effects of beef and dairy production, a study on human disturbance of aquatic animals in the Florida Keys, an article on the animal welfare effects of assisted reproduction technologies, and new research about how to integrate environmental and animal protection in policymaking at local and global scales. We are always seeking new research opportunities as well, so if you have ideas for us, please let us know. You can visit our website for information about research and opportunities, and you can contact us at ceap@nyu.edu with questions or suggestions.

Thank you to everyone in the CEAP community for engaging with our work, and again, special thanks to Dale Jamieson for all you continue to do to make our work possible. Our team is honored to address such important issues with such wonderful colleagues, and we look forward to continuing this work for years to come.

With gratitude,

Jeff Sebo
Director

About the Center

Environmental and animal protection are linked in many ways, but these links were obscured for much of the late twentieth century. During that time, the environmental protection movement focused primarily on species conservation while the animal protection movement focused primarily on animal research. Recently, however, the environmental protection movement has started to focus more on climate change, and the animal protection movement has started to focus more on farmed and wild animals. As a result, these movements have now partially converged.

MISSION

CEAP provides academic leadership for research and policymaking about critical issues at the intersection of environmental and animal protection.

Advancing environmental and animal protection in a world reshaped by human activity requires broad changes in values, behavior, governance, and technology. The NYU Environmental Studies and Animal Studies communities produce leading research on these issues, examining how humans affect animals, global health, and the environment; how these global changes affect humans and nonhumans alike; and how new systems of governance can address these issues. Yet much more work on these topics is needed to meet the urgency of the moment.

Established in 2018, the NYU Center for Environmental and Animal Protection (CEAP) is an endowed research center that provides academic leadership for research and policymaking related to environmental and animal protection. We play this role by hosting workshops, conducting and supporting research, and producing policy reports, among other activities. Agriculture and conservation are central themes for our work given their global significance for humans, animals, and the environment, but we examine other themes as well.

Our research has three distinguishing characteristics:

(1) Our research is both rigorous and accessible, maintaining the highest scholarly standards while remaining useful for a wide audience

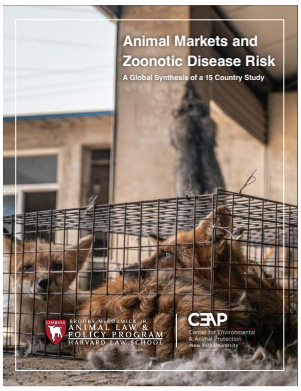
(2) Our research builds bridges within academia, examining environmental and animal protection through the humanities, social sciences, and natural sciences

(3) Our research builds bridges beyond academia, establishing connections with researchers and policymakers in both the public and the private sectors

Our work benefits enormously from our integration into the broader Environmental Studies and Animal Studies communities at NYU. We work closely with an outstanding group of faculty and graduate students in the Department of Environmental Studies as well as with collaborators throughout the university, for instance in the School of Law and the School of Medicine. We also share an administrative team with the NYU Center for Mind, Ethics, and Policy (located in the same department), increasing capacity and efficiency for both centers.

2024 Research

CEAP supports research on environmental and animal protection by contributing funding, authorship, or both. What follows is a list of outputs to which our team contributed in 2024.



Animal Markets and Zoonotic Disease Risk: A Global Synthesis of a 15 Country Study

Independent Report

Ann Linder (Harvard Law School)
Bonnie Nadzam (Harvard Law School)
Dale Jamieson (New York University)
Kristen Stilt (Harvard Law School)
Valerie Wilson McCarthy (Harvard Law School)

Zoonotic diseases, which spread from animals to humans, pose severe global health risks. This report, co-sponsored with Harvard Law School's Brooks McCormick Jr. Animal Law & Policy Program, examines public health threats linked to animal markets and their suppliers, including the wildlife trade, livestock production, and wildlife farming. It also highlights regulatory shortcomings that leave populations vulnerable to zoonotic outbreaks and future pandemics.

The report brings forward new examples and images gathered from across six continents to describe the landscape of zoonotic risk from a global perspective, sketching some of the most common pathways through which diseases move from animals into humans. It includes both a global synthesis and 15 country case studies written by local experts, making it one of the most comprehensive assessments to date of zoonotic risk globally. Specifically, the report:

- Assesses risk from animal markets and the major sources that supply these markets, including the wildlife trade, livestock production, and the wildlife farming industry
- Analyzes how regulation of these industries falls short of protecting public health, increasing the risk of future pandemics and leaving the public vulnerable
- Addresses how misinformation and misconceptions about zoonotic risks can undermine public health efforts
- Demonstrates that zoonotic disease outbreaks often follow predictable patterns, and challenges the idea that little can be done to prevent zoonotic outbreaks
- Makes a strong case that better regulation of animal industries is needed to prevent pandemics and safeguard global health security

You can find the project overview and a description of the research here.
You can find the global synthesis report here.
You can find a link to each of the 15 country reports here.

SELECT PRESS COVERAGE

Zoonotic Disease Report

These stories engage with our 2024 report as well as with the 2023 report on which it builds.

The NATION'S HEALTH
A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

Next pandemic could start in the US, disease experts warn

By Teddi Nicolaus, October 2024

"A 2023 report from Harvard Law School and New York University warned that the scale and diversity of high-risk interactions between humans and animals in the U.S. is greater than in almost any other country, making the nation uniquely vulnerable to diseases that can jump from animals to humans."

The New York Times

Bird Flu Has Already Appeared in New York's Animal Markets. What's Next?

By Apoorva Mandavilli, September 9, 2024

"Ms. Linder and her colleagues recently analyzed live animal markets in 15 countries, including the United States. Their study concluded that the markets posed 'a serious and pressing threat to global health security' and that the regulations in place were 'not proportional to risk.'"

NOTUS

Mistrust Between Farmers and the Government Is Jeopardizing Bird Flu Response

By Anna Kramer, May 16, 2024

"'Scientists and government officials critically need [data about the spread of bird flu in dairy cattle], and it's important for broader public health. But all of those reasons may be less compelling to them now than they were four years ago ...,' said Ann Linder, a researcher at Harvard's animal law and policy program who has interviewed farmers and officials about disease tracking."

USA TODAY

In pandemic's shadow, risk of animal to human disease spread still high

By Karen Weintraub, July 21, 2024

"Regardless of how the COVID-19 pandemic started, it's clear that deadly diseases can jump from animals to humans – and a new report from Harvard Law School and New York University finds we're not doing enough to prevent another animal-borne virus from becoming the next global pandemic."


PNAS

Opportunities for carbon sequestration from removing or intensifying pasture-based beef production

Opportunities for carbon sequestration from removing or intensifying pasture-based beef production

PNAS 121 (46): e2405758121

Matthew N. Hayek (New York University)
Johannes Piipponen (Aalto University)
Matti Kummu (Aalto University)
Kajsa Resare Sahlin (Stockholm University)
Shelby McClelland (New York University)
Kimberly Carlson (New York University)

Pastures, where ruminant livestock graze, currently cover approximately one-third of the Earth's surface. Removing livestock from these areas can help mitigate climate change through carbon sequestration in regrowing vegetation and recovering soils—especially in places where native forests could return. However, removing livestock also reduces the production of food and fiber, creating a tradeoff between pasture productivity and the ruminant meat these pastures provide.

To understand this tradeoff, this study evaluated the "carbon opportunity intensity" of pastures worldwide at a high spatial resolution, capturing how much carbon could be stored if beef-producing cattle were removed from each pasture. It finds that removing cattle from high–carbon intensity pastures could sequester 34 (22 to 43) gigatons of carbon, equivalent to 125 (80 to 158) gigatons of CO_2. This amount exceeds global fossil CO_2 emissions from 2021 to 2023.

Such a shift would result in a relatively modest loss of just 13% (9–18%) of total global beef production on pastures, primarily in high- and upper-middle-income nations. Meanwhile, in many lower-income countries with relatively inefficient beef production, improving production efficiency to about 47% of high-income countries' efficiency could fully offset this global loss, though attempts to improve efficiency introduce other risks for humans and animals that must be carefully managed.

Overall, this study shows that 45% of global beef production occurs in regions that would otherwise host carbon-rich forests. In many high-income countries, producing beef is especially inefficient compared to the forest cover—and carbon storage—that could be gained by restoring these pastures. At the same time, developing countries could produce beef more efficiently by improving existing practices, using less land, and avoiding intensive, factory-style confinement.

CEAP contributed to this project via our postdoctoral scholar Shelby McClelland. Our NYU Environmental Studies colleagues Matthew Hayek and Kimberly Carlson contributed as well.

You can read the article here.

SELECT PRESS COVERAGE

Opportunities for Carbon Sequestration
These stories engage with the 2024 article as well as with related research.

Anthropocene

Trading cows for forests in a few wealthy countries could deliver huge climate benefits
By Emma Bryce, November 15, 2024

"In a survey of global cattle pasturelands, [the researchers] reveal that wealthy and middle-income countries hold the greatest potential to transform former grazing lands into carbon-sequestering habitats. In fact, reducing global cattle production by 13%—less than a fifth—and turning it over to nature in these places could lock away 125 gigatons of CO_2. … The findings align with growing consensus that richer countries should shoulder the burden of emissions cuts—a point the researchers didn't set out to make, but which emerged organically from their data."

Inside Climate News

Returning Grazing Land to Native Forests Would Yield Big Climate Benefits
By Georgina Gustin, November 4, 2024

"Removing cattle from carbon-rich soils in the eastern U.S. and western Europe while intensifying production elsewhere could drastically cut greenhouse gas emissions, with little hit to global protein production, a new study shows. … The study, led by Matthew Hayek, an assistant professor in New York University's Department of Environmental Studies, found that reducing livestock production by as little as 13 percent in some areas could remove 125 billion tons of carbon dioxide from the atmosphere, an amount equivalent to global fossil fuel emissions over the last three years."

npr

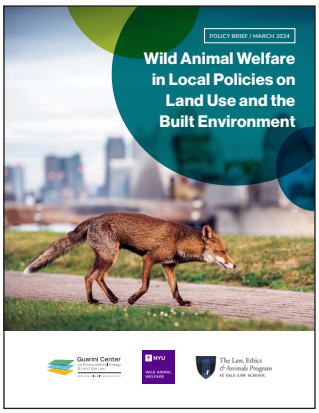
Regenerative agriculture is sold as a climate solution. Can it do all it says?
By Julie Simon, September 10, 2024

"A lot of money is at stake, Hayek says, both for companies and governments. … If the USDA promotes regenerative farming practices like regenerative grazing and cover crops where some climate benefits are unclear, Hayek says that money may not have its intended climate impact. 'We need to think pretty smartly about how we distribute literally billions in taxpayer money,' Hayek says."

ZME SCIENCE

Cutting beef production by just 13% could absorb billions of tons of CO_2
By Mihai Andrei, November 5, 2024

"For years, we've heard that eating less meat, especially beef, can positively impact the climate. Now, a new analysis led by Matthew N. Hayek from New York University suggests that even modest cuts in beef production in wealthier nations could have a significant effect. The study finds that by focusing on specific grazing lands, we could reforest low-productivity cattle pastures, absorbing billions of tons of carbon dioxide in the process."



Animal Welfare in Local Policies on Land Use and the Built Environment

Independent Report

Alisa E. White (New York University)
Jeff Sebo (New York University)
Becca Franks (New York University)
Adalene Minelli (New York University)
Katrina M. Wyman (New York University)
Daniel Krupa (New York University)
Viveca Morris (Yale University)
Toni Sims (New York University)
Arthur L. Caplan (New York University)

This report details strategies for including wild animal welfare in policies on land use and the built environment. For example, cities can implement bird-friendly building materials, green infrastructure, tree cover, and bans on gas leaf blowers. They can also create an animal welfare office and integrate animal welfare into existing planning and monitoring processes for biodiversity. CEAP co-sponsored this report with the NYU Guarini Center on Environmental, Energy, and Land Use Law, the NYU Wild Animal Welfare Program, and the Yale Law, Environment & Animals Program. Our partner programs launched the report at an event featuring leaders from the NYC Office of Animal Welfare, the NYU Office of Sustainability, and Wild Animal Initiative.

You can read the report here and the highlights here, and you can view the launch event here.

Aristolochia pulvinata, a new species of Aristolochiaceae from Yunnan, Southwest China

Phytotaxa 675 (3): 261–272

Honglin Zhang (Southwest Survey and Planning Institute of National Forestry and Grassland Administration)
Yifan Wang (New York University)
Zirui Guo (Suzhou Lianhelvyou Ecological Agriculture Development Co.)
Tong Zhu (Southwest Survey and Planning Institute of National Forestry and Grassland Administration)
Huhua Yang (Management Bureau of Jinguangsi Provincial Nature Reserve)
Zhijian Yin (Southwest Survey and Planning Institute of National Forestry and Grassland Administration)

This article introduces *Aristolochia pulvinata*, a newly discovered species in the Jinguangsi Nature Reserve of Yunnan Province, China, notable for its thickened perianth structure that sets it apart from relatives. Field observations reveal that *A. pulvinata* coexists with *A. ovatifolia* yet shows clear morphological distinctions, with no evidence of hybridization. Because this species is currently known from just one region, the authors classify it as Critically Endangered under IUCN criteria. This finding is the first output of a CEAP-funded project aimed at clarifying *Aristolochia* taxonomy, an urgent task given widespread habitat loss, illegal trade, and the genus's critical but understudied importance for butterfly protection and conservation.

You can read the article here.


frontiers | Frontiers in Animal Science

Climate change, public health, and animal welfare: towards a One Health approach to reducing animal agriculture's climate footprint

Climate change, public health, and animal welfare: towards a One Health approach to reducing animal agriculture's climate footprint

Frontiers in Animal Science 5: 1-16

Cleo Verkuijl (Stockholm Environment Institute, US)
Jessie Smit (Harvard University)
Jonathan M. H. Green (Stockholm Environment Institute, York, UK)
Rebecca E. Nordquist (Utrecht University)
Jeff Sebo (New York University)
Matthew N. Hayek (New York University)
Maria José Hötzel (Universidade Federal de Santa Catarina)

This article argues that efforts to address the climate effects of animal agriculture must account for animal welfare and public health effects as well. Applying a One Health lens, it evaluates three strategies: "sustainable intensification" (keeping or boosting production while limiting emissions), "species shift" (choosing animals with lower emissions footprints), and "systemic dietary change" (moving toward plant-based or other alternatives). It highlights that intensification and species shift can introduce new risks for animals and public health, while systemic dietary changes offer promise—provided that all populations can access adequate nutrition. CEAP contributed to this project via our director Jeff Sebo, and our colleague Matthew Hayek participated as well.

You can read the article here.

Designing a "Made in America" Meat Tax

NYU Environmental Law Journal 32(2): 157–206

Dale Jamieson (New York University)
Emma Dietz (New York University)
Katrina M. Wyman (New York University)


DESIGNING A "MADE IN AMERICA" MEAT TAX

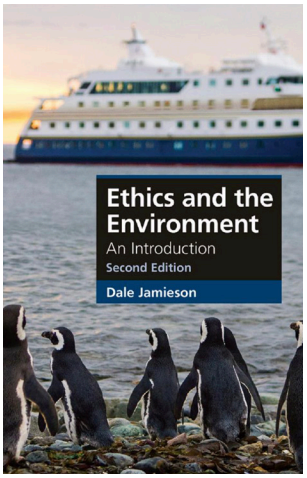
DALE JAMIESON,* EMMA DIETZ,† & KATRINA M. WYMAN‡

ABSTRACT

Agriculture is the fourth largest source of greenhouse gas (GHG) emissions in the United States, and agriculture is the largest national source of methane emissions in particular. Yet regulators have paid far less attention to emissions from agriculture than from transportation and electricity, the top two sources of GHG emissions nationally. This Article seeks to put the idea of a meat tax on the agenda of scholars and climate policymakers as a tool for reducing GHG emissions from agriculture. Drawing on scholarship and policy proposals from other jurisdictions, where discussions of taxing meat are further advanced, this Article identifies key issues that would need to be addressed to design a meat tax that could be implemented in the United States. It also recommends an iterative modelling process to devise concrete proposals for an equitable meat tax that would reduce agricultural GHG emissions. A meat tax could be one tool in a basket of policy measures designed to reduce emissions from agriculture. In addition, reducing human consumption of meat would have the ancillary benefits of improving human health and animal welfare, as well as the environment.

Agriculture is the fourth largest source of greenhouse gas (GHG) emissions in the United States, yet regulators have paid far less attention to emissions from agriculture than from transportation and electricity. This article seeks to put the idea of a meat tax on the agenda as a tool for reducing GHG emissions from agriculture. Drawing on scholarship from other jurisdictions, it identifies key issues that need to be addressed to design a meat tax for the United States. It also recommends an iterative modelling process to devise an equitable meat tax, showing how a well-designed meat tax could be one tool in a basket of policy measures designed to reduce emissions from agriculture with benefits for humans, animals, and the environment.

You can read the article here.



Ethics and the Environment, 2nd Edition

Cambridge University Press

Dale Jamieson (New York University)

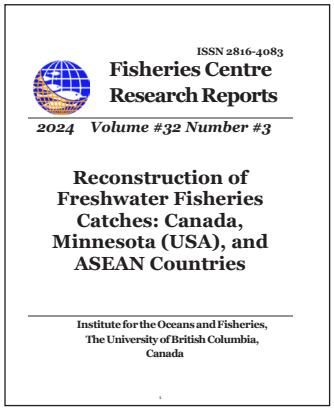
In the newly revised 2024 edition of *Ethics and the Environment*, Dale Jamieson delves into philosophical issues at the intersection of ethics and environmental science, with additional attention to aesthetics and political theory. Throughout the book, he examines human morality, meta-ethics, normative ethics, animal ethics, the value of nature, and our obligations to present and future generations—culminating in a thought-provoking discussion of how we should live in the Anthropocene. Peter Singer recommends the book "with confidence to anyone interested in learning about ethics, the environment and the interaction between them," while Michael Smith describes it as a "beautifully conceived book" by "a true master of the subject."

You can purchase the book here.

Reconstruction of Freshwater Fisheries Catches: Canada, Minnesota (USA), and ASEAN Countries

Fisheries Centre Research Report 32 (3): 253pp.

Maria Lourdes D. Palomares (University of British Columbia) (editor)
Daniel Pauly (University of British Columbia) (editor)



This Fisheries Centre Research Report extends the Sea Around Us project's global fisheries "catch reconstruction" methodology to inland fisheries. They find that, similar to marine fisheries, there are vast discrepancies between official statistics and their estimates of fish killed. They also—for the first time for the Sea Around Us—estimate the number of fish caught. Supported in part by CEAP, the report presents case studies in Canada, Minnesota, and Southeast Asia, highlighting issues like unreported recreational and subsistence fishing, and revealing that commercial fisheries kill billions of fish each year even in developed regions. It also features an introduction by CEAP's Dale Jamieson and Jennifer Jacquet that emphasizes the importance of recognizing fish as individuals.

You can read the report here.

Other Highlights

There were many other highlights in 2024 as well, both for CEAP and for our broader community of partner programs, faculty affiliates, and regular collaborators. We list several highlights here, but this list is not exhaustive:

This year, CEAP expanded significantly. We appointed Jeff Sebo as the next Director and Colin Jerolmack in a new role as Research Director. We also appointed Jennifer Jacquet to the Executive Committee; she now serves alongside Becca Franks, Yifei Li, and Sonali McDermid. Additionally, we hired Shelby McClelland as our first postdoctoral researcher; she now works with Matthew Hayek. Finally, we appointed Adalene Minelli as legal fellow, Audrey Becker as administrator, Sofia Fogel as coordinator, and Toni Sims as researcher.

With funding from the Brooks Institute for Animal Rights Law & Policy, CEAP and the Institute for Practical Ethics hosted a workshop at UC San Diego called "New Thinking in Conservation." While there are many microlevel conservation success stories, at the macrolevel conservation is failing. The workshop brought together leading philosophers, scientists, and lawyers to examine two issues implicated in this failure: a lack of clarity about conservation goals, and the political economy of the conservation system.

The NYU Department of Environmental Studies, which houses CEAP, continues to grow as well. In 2024, we launched the Center for Mind, Ethics, and Policy (CMEP) with a $6 million endowment while continuing to administer the Wild Animal Welfare Program (WAWP) and Animal Studies M.A. Program. And in 2025, our department will launch a world-class Environmental Studies PhD Program and move into a beautiful new space overlooking Washington Square Park to support our expanded activities and community.

Jennifer Jacquet, Becca Franks, Peter Godfrey-Smith, and Walter Sánchez-Suárez followed their 2019 article on the case against octopus farming with a widely circulated 100-author letter in *Science* about the importance of keeping octopuses wild, writing that "commercial octopus farming is incapable of meeting welfare requirements, unsustainable, and unnecessary for sustenance." Many other members of the CEAP team and community are listed as authors of the letter as well.

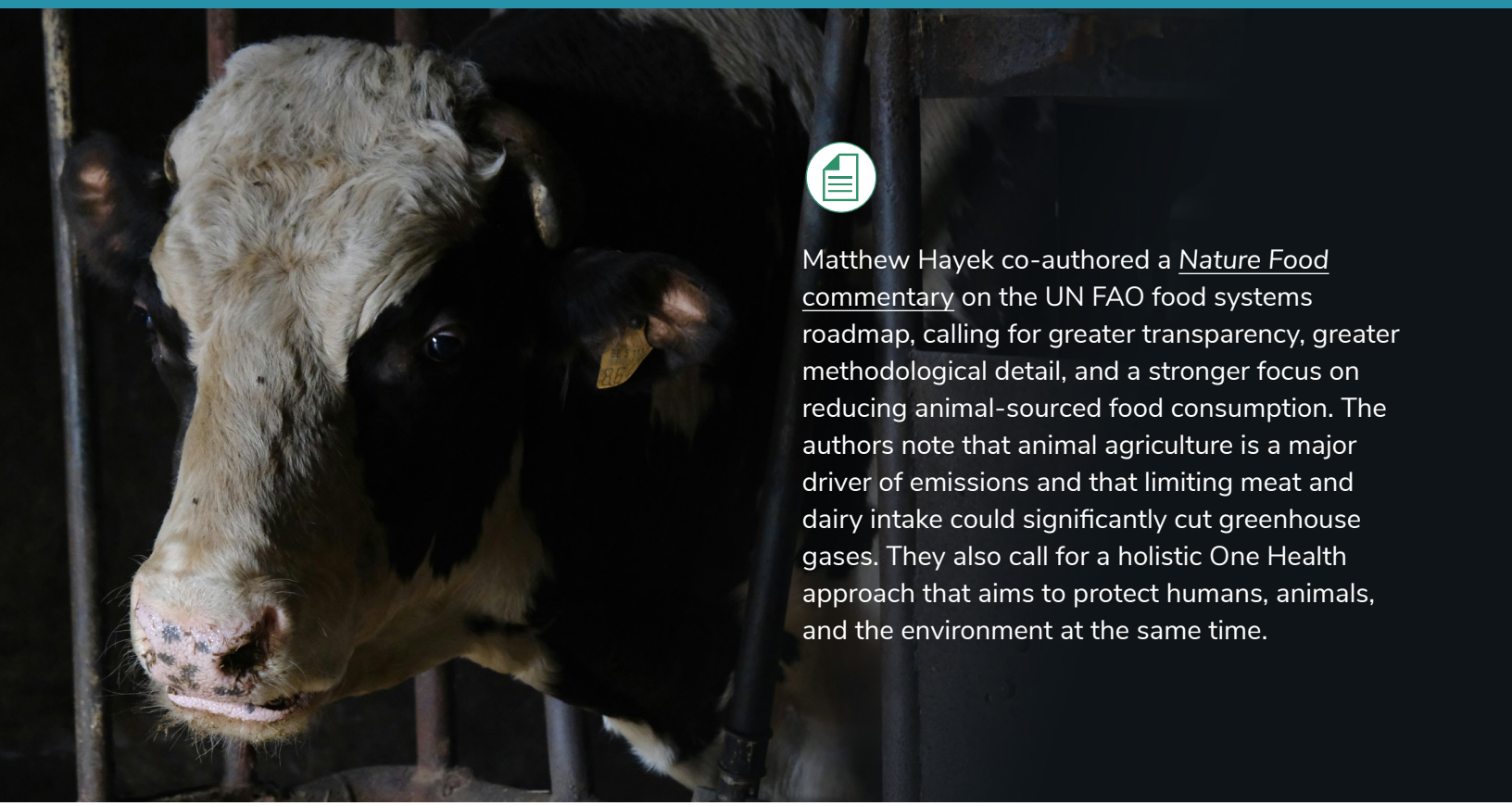
Our partner programs released important work this year, too. For example, in Spring 2024 CMEP and WAWP released the New York Declaration on Animal Consciousness (led by Kristin Andrews, Jonathan Birch, and Jeff Sebo), which holds that all vertebrates and many invertebrates have a realistic chance of being conscious and that we have a responsibility to consider welfare risks for these animals. The Declaration has collected more than 500 signatures and received coverage in more than 100 media outlets.

Our Environmental Studies colleagues released important work as well. For instance, David Kanter attended COP 29 to launch the new Global Nitrous Oxide Assessment, a joint report from the UN Environment Programme and the Food and Agriculture Organization, which he co-chaired. The report "highlights actionable steps to cut emissions by over 40%, with deeper reductions achievable through transformations in food systems and society," and it received coverage from Reuters, Hindustan Times, and InsideClimateNews.

CEAP Director Jeff Sebo released an open access edition of his book *Saving Animals, Saving Ourselves* (Oxford University Press), which examines the relationship between animals, pandemics, and climate change. Endorsed by leaders like Cory Booker and Jane Goodall, this book calls for including animals in global health and environmental policy by reducing our use of animals as part of our pandemic and climate change mitigation efforts and increasing our support for them as part of our adaptation efforts.

Becca Franks and Laurie Sellars published an article on the "dewilding" risks associated with mariculture, the cultivation of aquatic organisms in the ocean. The article notes that mariculture risks degrading the environment, threatening animal welfare and integrity, and distorting humans' perceptions of the nonhuman world. It also finds that captive animal and conceptual dewilding risks receive relatively little attention. Understanding these effects will be critical for guiding decisions about mariculture moving forward.

Matthew Hayek wrote a CEAP brief about animals as agents in conservation. Animals are capable of adapting to conditions that shape their survival, so conservation efforts often falter when treating them as predictable beings who belong in untouched habitats. Instead, when animals are recognized as collaborators in shaping their own outcomes—rather than objects to be managed—conservation initiatives tend to be more successful and responsive to the realities of shared habitats and human–animal interactions.



Matthew Hayek co-authored a *Nature Food* commentary on the UN FAO food systems roadmap, calling for greater transparency, greater methodological detail, and a stronger focus on reducing animal-sourced food consumption. The authors note that animal agriculture is a major driver of emissions and that limiting meat and dairy intake could significantly cut greenhouse gases. They also call for a holistic One Health approach that aims to protect humans, animals, and the environment at the same time.

Matthew Hayek, Jennifer Jacquet, and Spencer Roberts co-authored a paper on aquaculture with another colleague in *Science Advances*, challenging the widespread belief that aquaculture has drastically reduced its reliance on wild-caught fish. They identify errors in the commonly used Fish-In:Fish-Out indicator, and estimate that wild fish use is 27%–307% higher than previous estimates and rises to 106%–535% when including accidental catch in the calculation while excluding unfed aquaculture systems.

Arthur Caplan and Jeff Sebo published an op-ed in *The Los Angeles Times* about the Florida and Alabama bans on cultivated meat. They argue that if states ban any methods of meat production, they should ban methods associated with industrial animal agriculture due to their impacts on animals, public health, and the environment: "The production of cell-cultivated meat, plant-based meat, and other such alternatives is nowhere near harmful enough to warrant a ban. Ironically, however, industrial animal agriculture is."

Vox included Matthew Hayek and Jeff Sebo in its *2024 Future Perfect 50* list of "innovators, thinkers, and changemakers working to make the world a better place," in part for their work on the relationship between animal welfare, global health, and the environment. For example, the write-up credits Hayek for regularly publishing "creative, news-making research that clarifies animal agriculture's significant environmental toll," highlighting a 2021 paper about the "carbon opportunity cost" of meat production.

Looking Ahead

Here are some upcoming projects that our team is either leading or supporting. These projects are subject to change and this list is not exhaustive; some projects are not yet ready to share, and we also leave room in our plans to take advantage of opportunities as they arise.

Animal Welfare in Local Policies on Pest and Conflict Management
In preparation

Adalene Minelli (New York University)
Jeff Sebo (New York University)
Becca Franks (New York University)
Toni Sims (New York University)
Katrina Wyman (New York University)
Arthur Caplan (New York University)
Laurie Sellars (Yale Law School)
Viveca Morris (Yale Law School)

This report will discuss how cities can manage conflicts with wild animals in a way that protects humans, animals, and the environment at the same time. Drawing on examples where non-lethal methods and preventive measures have been successful, this project will outline strategies to mitigate human–wildlife tensions in urban environments without resorting to inhumane practices. By integrating animal welfare, public health, and environmental considerations, the report will guide policymakers toward humane, healthful, and sustainable conflict management policies.

Beneath The Surface: The Treatment & Representation Of Sharks In U.S. Tourism
In preparation

Laurie Sellars (Yale Law School)
Becca Franks (New York University)

Sharks face extinction from anthropogenic activities, yet negative human perceptions of them continue to hinder conservation efforts. Shark-centered tourism—sportfishing, ecotourism, and aquariums—claims to aid conservation but risks perpetuating harmful practices and stereotypes. This project evaluates these industries' treatment of sharks in the U.S., finding that while some "model" operators exist, most could better promote shark welfare and conservation. Notably, tourists need not pay more for less harmful activities.

Breaking Down Agricultural Emissions: Climate Pathways through Time and Space
In preparation

Matthew Hayek (New York University)
Shelby McClelland (New York University)

Matthew Hayek and Shelby McClelland continue their research on agricultural emissions. Their initial results seem to suggest that making livestock production more efficient through feedlots and feed additives like seaweed will not be enough to meet climate targets. Methane emissions will not decrease fast enough, unless we also reduce beef and dairy consumption. Currently, they are working on a peer-reviewed publication and a poster summarizing their results for the American Geophysical Union Annual Meeting.

Comparing impacts across take, no-take, and no-entry zones in the Florida Keys
In preparation

Spencer Roberts (University of Miami)
Jennifer Jacquet (University of Miami)

Research has shown time and time again that marine life is more abundant and diverse in no-take zones, but only a few studies have examined the additional benefits of no-entry zones—areas where human entry is forbidden and wild animals are neither hunted nor disturbed. In this multi-year project, we will compare human disturbance, biodiversity, and individual animal behavior across take, no-take, and no-entry marine reserves in the Florida Keys. The insights will be valuable in informing the design of marine protected areas.

Dining Delights for Swallowtails: A Focus on Isotrema Species for Butterfly Conservation
In preparation

Yifan Wang (New York University)
Zirui Guo (Suzhou Lianhelvyou Ecological Agriculture Development Co.)
Shuai Liao (South China Botanical Garden, Chinese Academy of Sciences)
Joyce G. Onyenedum (New York University)

This project will build a robust taxonomic framework for several previously misidentified *Aristolochia* species. Commonly known as pipevine plants, these endangered species are crucial hosts for protected *Papilionidae* butterflies but face rapid decline due to habitat loss and illegal trade. By describing five new species and addressing taxonomic confusion, this research will lay out a precise taxonomic foundation to support deeper investigations into their phytochemistry, ecology, and conservation, ultimately ensuring better protection for both plants and butterflies.

Domesticating Empire: American Power and the Industrialization of Life
In preparation

Oliver Lazarus (Harvard University)

This project traces how the United States federal government played a central role in transforming animal agriculture into a 70-billion-animal industry occupying 40% of Earth's habitable land. Beginning in the late nineteenth century, the U.S. state expanded its powers to stabilize the sector against disease and trade threats, then exported its model of agricultural governance worldwide. The project illuminates how farmed animal life—and the systems sustaining it—spread globally in alignment with U.S. interests throughout the twentieth century.

eDNA detection of *Octopus* (genus) in South Miami, FL
In preparation

Janelle Kaczmarzewski (University of Miami)
Jennifer Jacquet (University of Miami)

This project will use non-invasive methods (eDNA) and citizen science (i.e., sample collection by community members) to establish baseline abundance data across the *Octopus* genus. The collection and analysis of ~250 water samples will demonstrate the potential of non-invasive techniques to estimate populations. It will also foster community engagement and elevate public awareness about octopuses in South Miami. The dissemination of the results will be integrated with local policy efforts aimed at establishing small protected areas off of Miami Beach.

The Ethics of Food and the Environment
In preparation

Christopher Schlottmann (New York University)

Christopher Schlottmann is writing a CEAP-supported book tentatively titled *The Ethics of Food and the Environment*, which examines ethical considerations at the intersection of food, animals, and the environment. The book integrates updated empirical dimensions of the environmental impact of food production. It also analyzes central topics faced in understanding the issue, including naturalness, indirect values, and environmental ethics.

From Pandas to Corals: Assessing the Animal Welfare Impacts of Assisted Reproduction Technologies
Journal of Applied Animal Ethics Research (forthcoming)

Toni Sims (New York University)
Becca Franks (New York University)
Erin Ryan (New York University)
Jeff Sebo (New York University)

While assisted reproduction is potentially very beneficial for wild animal species, it also raises significant ethical concerns. This perspective considers the welfare effects of assisted reproduction for individual wild animals, considering corals and pandas as case studies. Many (if not all) wild animals are welfare subjects who deserve moral consideration. This perspective emphasizes that human interventions in wild animals' lives, even when made with good intentions, can often have unintended and undermining consequences.

The Moral Circle
W. W. Norton (2025)

Jeff Sebo (New York University)

This book argues for extending moral consideration to insects, future AI systems, and perhaps even plants, fungi, and microbes. At present, human exceptionalism still prevails, leading us to exploit and exterminate billions of vertebrates and trillions of invertebrates per year, often unnecessarily. Examining provocative case studies involving captive elephants, factory-farmed insects, and pigs used for transplantation, the book argues that building a better future requires shedding human exceptionalism and radically rethinking our place in the world.

One Health and Multispecies Urban Infrastructure
One Health and the Law: Existing Frameworks, Intersections and Future Pathways (forthcoming)

Jeff Sebo (New York University)
Alisa E. White (New York University)
Toni Sims (New York University)

This chapter, which builds on our 2024 independent report, makes the general case for including animal welfare in local policymaking, with special focus on institutional and infrastructural change. It starts by discussing the importance of animal welfare for the One Health framework, along with key questions about animal welfare. It then discusses general principles and policies that can guide cities in building multispecies urban infrastructure, including the use of bird-friendly building materials, improved road design, and improved lawn maintenance practices.

Towards a Global Ban on Industrial Animal Agriculture by 2050
Environmental Law (2025)

Jeff Sebo (New York University)
Emma Dietz (Weitz & Luxenberg)
Toni Sims (New York University)

Industrial animal agriculture is central to the global economy yet causes significant harm to humans, animals, and the environment. The international community has a history of addressing transboundary harms through regulations, including protecting the ozone layer, combating tobacco addiction, and preventing forced labor and torture. This paper explores international legal precedents to argue that a global ban on industrial animal agriculture is both feasible and essential to achieving global environmental, health, and social goals.

Our Team

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