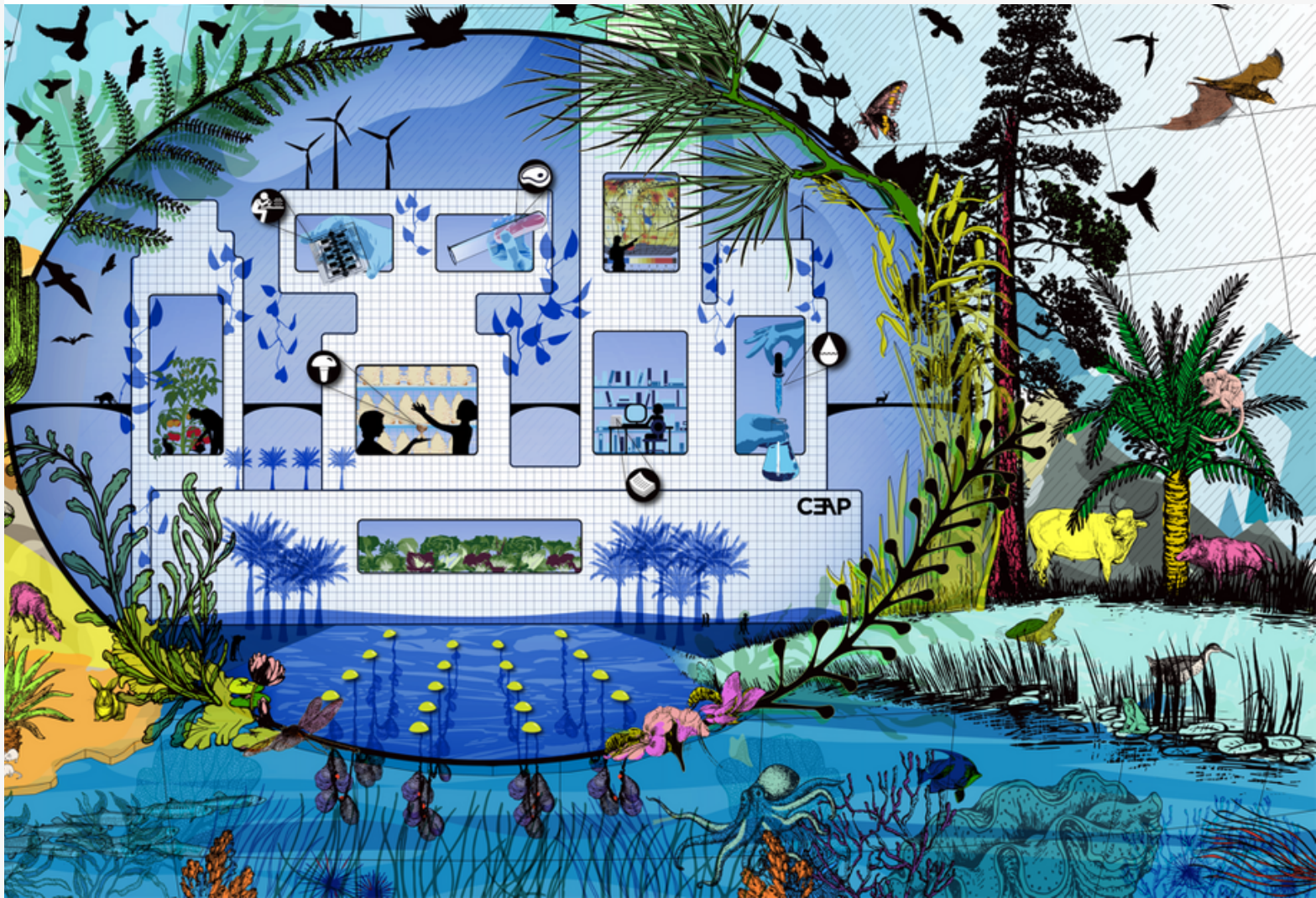




CENTER FOR ENVIRONMENTAL AND ANIMAL PROTECTION

2020-2021

ANNUAL REPORT



[HTTPS://WP.NYU.EDU/CEAP](https://wp.nyu.edu/ceap)
CEAP@NYU.EDU

INTRODUCTION

NYU's Center for Environmental and Animal Protection (CEAP) is an endowed research center that conducts, supports, and disseminates research that contributes to environmental and animal protection. The Center has three distinguishing features: (1) its focus on highly credible, evidence-based research that provides usable knowledge and policy recommendations to decision-makers and advocacy groups; (2) its emphasis on the integration of environmental and animal protection issues; and (3) its attention to fostering collaboration between scholars and private-sector change makers. In addition to supporting academic research, CEAP publishes occasional research briefs intended for a wide audience that you can sign up for by emailing: ceap@nyu.edu.

The ongoing global Covid-19 pandemic continues to underscore the interconnectivity between human health and our exploitative relationships with other animals through live animal markets, factory farming, and habitat destruction. After another year of intense climate events, from wildfires to hurricanes, the COP26 summit in Glasgow resulted in important agreements regarding methane and carbon emissions, deforestation, and coal, though far more work is needed to secure the futures for Earth's inhabitants, human and nonhuman alike.

In its third year, CEAP's research projects continue to focus on animal agriculture and its relation to environmental and animal protection. Our two largest research projects explore 1) global pathways towards a world without meat and 2) bending the curve of meat and dairy consumption in China. In addition, CEAP has supported projects on the impacts of COVID-19 on nonhumans, the environmental and welfare effects of CAFO-free chicken production, and the development of plant-based proteins.

CEAP is an independent entity, housed in NYU's Department of Environmental Studies, that maintains close collaborative relationships across the University including with NYU Animal Studies, the Environmental Humanities Initiative, and the professional schools in law, business and medicine. Since becoming a degree-granting program in 2007, Environmental Studies has graduated more than 620 majors. The Animal Studies minor, created in 2010, has graduated approximately 115 students. The MA program in Animal Studies, which welcomed its inaugural class in 2018-19, has awarded 22 degrees and has 33 enrolled students contributing to a diverse community of energy, enthusiasm, and talent.





PETER SINGER AWARDED THE BERGGRUEN PRIZE

CEAP was honored to have Peter Singer, Ira W. DeCamp Professor of Bioethics at Princeton University, speak at our launch event in September 2018. We are proud to celebrate Professor Singer's receipt of the 2021 Berggruen Prize for Philosophy & Culture. The \$1 million Prize is awarded annually to thinkers whose ideas have "profoundly shaped human self-understanding and advancement in a rapidly changing world." The Berggruen Institute selected Singer for reinvigorating utilitarianism as part of academic philosophy and as a force for change, shaping the animal rights and effective altruism movements, and advocating for more expansive socio-economic policies in emergency response and the eradication of global poverty. Professor Singer will donate the Berggruen Prize money to The Life You Can Save, the philanthropic organization founded by Singer, and to other charities and animal rights organizations.

THE CLIMATE RESPONSIBILITIES OF INDUSTRIAL MEAT AND DAIRY PRODUCERS



Photo: Greenpeace.

In March 2021, the journal *Climatic Change* published a CEAP funded study that was the first peer-reviewed study to assess the climate responsibilities of the world's largest 35 meat and dairy companies. The work builds off of previous work that assessed the climate responsibilities of industrial carbon producers. Since its publication, the study has received widespread media attention, including being featured in *Inside Climate News*, *Vox*, *Eat for the Planet* Podcast, *DeSmog*, and *The New York Times*.

The study was authored by Oliver Lazarus, a graduate of NYU's M.A. program in Animal Studies, Professor Sonali McDermid, and Professor Jennifer Jacquet, associate professors in NYU's Department of Environmental Studies.

THE MEAT AND DAIRY INDUSTRY'S FIGHT AGAINST CLIMATE ACTION

In May 2021, *The Washington Post* published an op-ed by Professor Jennifer Jacquet examining the meat and dairy industry's strategy to fight action on climate change and the parallels between its strategy and that of Big Oil. In the op-ed, Professor Jacquet describes how this industry and its trade associations downplay animal agriculture's contributions to climate emissions, undermine climate policy, fund research to undermine scientific literature, and greenwash their products. Despite these similarities, Professor Jacquet argues that Americans have much more choice over their dietary decisions than they do their energy sources, suggesting that this is one area where Americans have significant potential for change.



TOWARD A MEATLESS FUTURE

Humans now manage, slaughter, and consume billions of terrestrial and trillions of aquatic animals each year to fulfill growing meat demands. As a result, animal agriculture is now among the largest drivers of global environmental change, contributing to climate change, exceedances of biogeochemical flows, biodiversity and wild animal loss, land, energy, and water consumption, and ecosystem destabilization. Despite the enormity of animal agriculture, global food and nutrition insecurity is still both pervasive and persistent – the sector primarily serves the industrialized world and wealthier population segments.

Reducing human consumption of animal protein is one of the most effective things we can do for both environmental and human health, and animal welfare. Furthermore, an emerging body of research shows that diets higher in plant proteins - pulses, legumes, and coarse grains - could offset losses in animal protein by providing nutritionally dense foodstuffs, thereby contributing to food security and protein needs, while also providing several environmental co-benefits.

In response to these challenges, CEAP has undertaken a long-term research commitment to exploring how to reduce animal meat production and consumption while ramping up plant-based alternatives. A CEAP study, currently under review, “Research Needs for a Protein Transition,” identifies three core activities as part of a research agenda to inform regional and country-specific protein transitions: improved data collection and analysis at the intersection of protein production/consumption and human and natural systems; the development of current and future alternative protein pathways with varying degrees of ambition; and the use of these pathways to evaluate trade-offs and co-benefits (e.g. across environmental and socio-economic dimensions), and inform decision-making at national and regional scales.



Another recent CEAP study published in the peer-reviewed journal, *Frontiers in Sustainable Food Systems*, identifies an apparent barrier to the transition to plant-based diets. “Closing Research Investment Gaps for a Global Food



Transformation,” shows that USDA research investments from 2008-2019 were over three times greater for commodity crops used largely for animal feed (e.g., maize and soy), than for grain legumes and coarse grains (e.g., oats, beans, and lentils) that could better serve protein transitions and sustainable cropping systems. This current USDA funding allocation limits the development, adoption and market potential of plant proteins and poses a barrier to food system transformations. Achieving nutritious, plant-forward diets requires more public agricultural investment in such “minor” crops as oats, beans, and lentils, and increased collaboration between public health, nutrition, agriculture, and environmental sectors.

AY 20-21 Research Team

Sonali McDermid (Associate Professor, Department of Environmental Studies, NYU);

Matthew Hayek (Assistant Professor, Department of Environmental Studies, NYU);

Dale Jamieson (Professor, Department of Environmental Studies, NYU);

David Kanter (Associate Professor, Department of Environmental Studies, NYU)

Galina Hale (Professor, Department of Economics, UC Santa Cruz);

Marcia DeLonge (Senior Scientist, Union of Concerned Scientists Food and Environment Program);

Mustafa Saifuddin (Staff Scientist, Earth Justice);

Alex Bollington (M.A. Candidate, Department of Food Studies and Nutrition, NYU);

Dhara Mungra (M.S. Alumna, Center for Data Science, NYU);

Sumedha Rai (M.S. Candidate, Center for Data Science, NYU)

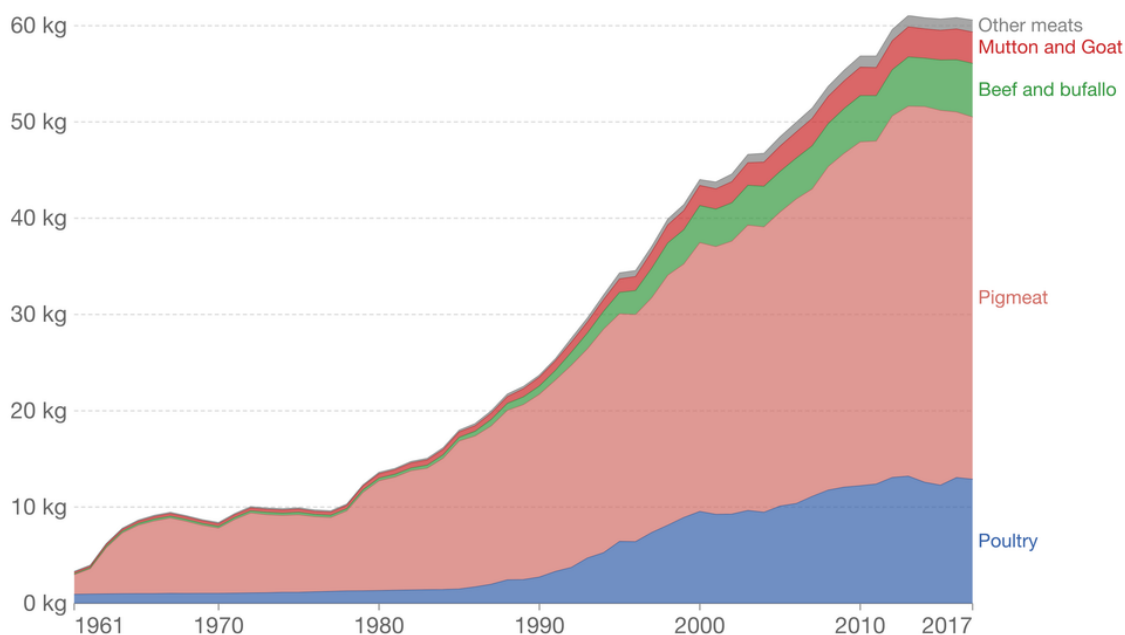
BENDING THE CURVE: MEAT AND DAIRY PRODUCTION AND CONSUMPTION IN CHINA

The history of the People's Republic of China (PRC) is marked by an extraordinary turnaround from an isolated and economically impoverished nation to one that is integrated into the global economy and increasingly troubled by problems such as obesity and pollution. With this has come profound changes in Chinese diets. In 2018 China accounted for 26.3 percent of the world's total meat consumption, up from 14.6 percent in 1990. In 2018, the per capita consumption level in China exceeded the global average of 34.8 kilograms by 41.7 percent, quickly approaching the OECD average of 69.5 kilograms. In 2016 alone, China slaughtered more than 14 billion terrestrial animals for food, or about 448 animals per second. In response to these trends, CEAP has launched a long-term research project to understand and bend the curve on meat and dairy production and consumption in China.

Per capita meat consumption by type, China, 1961 to 2017

Average per capita meat consumption broken down by specific meat types, measured in kilograms per person per year. Data is based on per capita food supply at the consumer level, but does not account for food waste at the consumer level.

Our World
in Data



Source: UN Food and Agricultural Organization (FAO)

OurWorldInData.org/meat-production • CC BY

In 2016, in alignment with President Xi's plans to foster an "ecological civilization" ("生态文明"), the PRC's National Health and Family Planning Commission issued new dietary guidelines that call for limiting lean meat consumption by about 50% to 40-75 grams per day. In a study forthcoming in the *Journal of Food Law and Policy*, CEAP researchers examine the historical evolution of China's Dietary



中国居民平衡膳食宝塔 (2016)



Guidelines (known as the Food Pagoda) and analyze their implications for environment, health, and animal welfare. It compares these recommendations to actual food consumption patterns, finding that the Pagoda tends to reflect prevailing food consumption patterns rather than drive them. Though the Pagoda received international attention in 2016 for its meat reduction recommendation, the authors conclude that the impacts on climate change, human health, and animal welfare might not be as large as observers have hoped.

CEAP's research further shows that the Pagoda tends to recommend foods favored by urban populations, yet any attempt to understand China cannot ignore the countryside. Much remains unknown about dietary habits in China's villages. CEAP's researchers are currently exploring the complex webs of social relations, collective memories, festival cultures, intergenerational dynamics, and culinary preferences drawing on interviews, observations, and food diaries to paint a detailed picture of animal meat's many incarnations in the social life of a Chinese village in the largely agricultural province of Shandong. This ongoing research effort seeks to tell the lived stories behind rural China's unmatched transformation from starvation to abundance within one single generation. The qualitative and quantitative evidence from this research will provide unique insights into the cultural implications of eating at the personal, family, community, and national levels. With China's long history of plant-based eating and growing concerns about diet-related health issues, we expect this project to yield concrete suggestions for policymaking and advocacy related to encouraging meat reduction in rural China.

AY 20-21 Research Team

Yifei Li (Assistant Professor, Department of Environmental Studies, NYU Shanghai);

Dale Jamieson (Professor, Department of Environmental Studies, NYU);

Congcong Li (CEAP Postdoctoral Fellow, NYU Shanghai);

Michelle Huang (B.A. Alumna, Environmental Studies, NYU Shanghai)

TOWARDS PLANT-FORWARD DIETS



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Executive Director,
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NYU School of Law



Katrina Wyman
Sarah Herring Sorin
Professor of Law,
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October 15, 2021 marked the launch of *Towards Plant-Forward Diets: A Toolkit for Local Leadership*, a report prepared by CEAP and the Guarini Center of the NYU Law School, with support from the Brooks Institute for Animal Law and Policy. The report highlights the legal authority that local governments have to reduce meat consumption and presents options for cities to encourage a transition towards plant-forward diets. Dale Jamieson, NYU Professor of Environmental Studies and Philosophy and CEAP Director, moderated the launch event, which included Rachel Atcheson (Assistant to the President, Office of the Brooklyn Borough President, Eric L. Adams), Nilang Gor (Founder, Cultivate Empathy for All, Senior Scientist, Process Development, Catalyst Biosciences), Danielle Spiegel-Feld (Executive Director of the Guarini Center and Adjunct Professor, NYU Law School), Chloe Waterman (Senior Program Manager, Climate-Friendly Food Program, Friends of the Earth), and Dan Zarrilli (Special Advisor, Climate & Sustainability, Columbia University). The report was authored by Adalene Minelli, Jeff Sebo, Danielle Spiegel-Feld, and Katrina Wyman. Since its launch, the report has been widely distributed, including to incumbent and newly-elected New York City Council members.

OTHER PROJECTS

One Health, COVID-19, and a Right to Health for Human and Nonhuman Animals

COVID-19 is a reminder that human, nonhuman, and environmental health are linked, and so efforts to improve human, nonhuman, and environmental health should be linked as well. But current efforts to link these issues fall short by not doing enough for humans, not doing enough for nonhumans, and focusing narrowly on health instead of expansively on health, welfare, and rights. This CEAP-supported study, forthcoming in a special issue of the journal *Health and Human Rights*, surveys the case for respecting and promoting human and nonhuman welfare, health, and rights simultaneously. The authors review the impacts of COVID-19 on human and nonhuman populations—including farmed, research, companion, and wild nonhuman animals—and propose steps that can be taken that respect and promote both human and nonhuman health, welfare, and rights.

Laurie Sellars (M.A. Student in Animal Studies, Department of Environmental Studies, NYU);
Kimberly Bernotas (Animal Studies M.A. Alumna, Department of Environmental Studies, NYU);
Jeff Sebo (Clinical Associate Professor, Department of Environmental Studies, NYU)

The Environmental and Welfare Effects of CAFO-Free Chicken Production

In 2018, the United States chicken industry slaughtered over nine billion chickens. As consumption of chicken continues to rise, so have welfare concerns regarding conventional concentrated feeding animal operations (CAFOs) and fast-growing breeds prone to bone damage. There is large-scale interest among producers and retailers to source slower-growing, higher-welfare chicken breeds raised on better management systems as soon as 2024. However, introducing slower-growing chicken breeds to the US CAFO agricultural system could increase the



annual number of chickens raised and slaughtered, creating unintended negative welfare outcomes. Additionally, the land required to take chickens out of CAFO systems may be impractical, or lead to destruction of wildlife habitat for crops and pasture. This study (currently under review) is the first to characterize the population changes and potential land-use consequences of a nationwide transformation for slower-growing and/or free-range chickens.

Iris Chan (Animal Studies M.A. Alumna, Department of Environmental Studies, NYU);
Becca Franks (Research Scientist, Department of Environmental Studies, NYU);
Matthew Hayek (Assistant Professor, Department of Environmental Studies, NYU)

The Genealogy of the Plant-Based Protein Industry

This project seeks to inform, support, and understand the development of policies that would improve the protection of animals and the environment through the transformation of industrial food production, specifically via the development of plant-based proteins. This project involves interviews with product developers and investors, and also includes compiling and analyzing a database of news media coverage and academic articles covering developments in the plant-based protein industry. This information will provide usable knowledge to inform policy recommendations to decision-makers and advocacy groups, as well as the strategies of private-sector innovators working to expand the plant-based protein industry and its impact.

Elan Abrell (Visiting Assistant Professor, Department of Environmental Studies, NYU);
Katerina Kalergios (M.A. Student in Animal Studies, Department of Environmental Studies, NYU)



RESEARCH BRIEFS

RESEARCH BRIEF #5

The climate responsibilities of industrial meat and dairy producers

Animal agriculture contributes at least an estimated 14.5% of global greenhouse gas emissions, and an estimated 23% of present-day anthropogenic global warming. The Food and Agriculture Organization of the United Nations predicts that meat consumption will increase 73% by 2050, but there has been little attention paid to the emissions and climate influence of the world's largest meat and dairy companies. Two companies, Fonterra in New Zealand and Nestlé in Switzerland, would make up over 100% of their headquarter country's total emissions target in the coming decade if extraterritorial emissions were applied to headquarter countries. All 10 of U.S.-based major meat and dairy companies have influenced climate-related discourse, ranging from lobbying against cap-and-trade, to funding research questioning the link between animal agriculture and climate change.

RESEARCH BRIEF #4

Alligator Wrestling in Florida: Examining Impacts on Animals and Conservation

Alligator wrestling is a popular tourist attraction in Florida, where it originated as a Native American hunting method. This study, the first of its kind, used a sample of 94 videos of alligator wrestling on YouTube to understand the characteristics of typical alligator wrestling match and its impact on alligator welfare and environmental conservation. The analysis suggests that alligator wrestling facilities are highly stressful to the individual alligators involved, and that they do little to benefit environmental and animal conservation. Instead, wrestlers prioritize entertaining tourists or discussing educational or environmental topics that are largely irrelevant to or even undermine conservation efforts.

PREVIOUS BRIEFS

RESEARCH BRIEF #3

Integrating human and animal health can prevent pandemics

RESEARCH BRIEF #2

Centering animals in climate change adaptation

RESEARCH BRIEF #1

Improving pulse production for a sustainable food future



LOOKING AHEAD

As with you, the lives of CEAP researchers continue to be dominated by the changing face of the COVID pandemic and the need to keep ourselves and our loved ones safe. The face-to face interactions on which creative research thrives have still not fully returned. Yet, our work continues. In early 2022 we expect to announce the results of a collaborative project with the Harvard Law and Policy Program and other partners around the world, that maps global regulatory responses to live animal markets. Expect to be surprised by our findings. In addition to the ongoing projects described in this report, we have launched new projects on the law, policy, and ethics of aquaculture, on the benefits of no-entry marine protected areas, and on how to implement a “meat” tax that is efficient, fair, and effective. We warmly thank those of you who make our work possible, and also those of you who find our work valuable. We welcome your feedback at ceap@nyu.edu.

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Dale Jamieson

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