The Methane Majors: 
Climate Change and Animal Agriculture in 
U.S. Courts 

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Over two dozen lawsuits have been filed in U.S. courts against fossil fuel companies by state and local government plaintiffs alleging climate harms and deceptions. But there are other central actors beyond these “Carbon Majors” that contribute heavily to the warming climate. Prominent among them is the animal agriculture sector, a significant emitter of greenhouse gases overall and an especially important source of potent methane emissions. Animal agriculture has thus far escaped most climate litigants’ notice. In jurisdictions around the world, though, the industry has begun to face serious legal challenges premised on its role in driving climate change.

After developing a first-of-its-kind comparative survey highlighting the most consequential legal challenges to date, this Article explores the present reality and future possibilities of climate change and animal agriculture litigation in the United States. With lessons and precedents drawn from both foreign and U.S. case law, we chart a variety of strategic courses that those who seek to hold animal agriculture accountable might consider. Given the United States’ outsized role in the global animal agriculture industry and inadequate regulation of its climate harms, climate change and animal agriculture litigation—whether successful in court, the court of public opinion, or both—could prove a powerful driver of climate change adaptation and mitigation.

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in the years to come. As this Article demonstrates, a spate of "Methane Majors" cases may be on the horizon.

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I. INTRODUCTION

Ten years ago, Richard Heede coined the term “Carbon Majors” to describe the 90 producers of oil, coal, natural gas, and cement that his ground-breaking research showed had contributed almost two-thirds of carbon dioxide (CO₂) and methane emissions from fossil fuel and cement production and consumption between 1751 and 2010.² Heede’s work provided a new perspective on climate accountability, giving corporate names to those bearing the most responsibility. As Heede observed at the time, the decision-makers leading the Carbon Majors—their CEOs and the ministers of the government-run enterprises among them—“could all fit on a Greyhound bus or two.”³

Together with progress in climate attribution science and the Paris Agreement, Heede’s work galvanized climate litigation.⁴ Such litigation shows promise for addressing gaps left by inadequate regulation and for holding major polluters accountable.⁵ In one line of prominent cases that began in 2017, state and local government plaintiffs have filed over two dozen lawsuits in U.S. courts against

fossil fuel companies, alleging various climate harms and deceptions.6 These lawsuits, often referred to as the “Carbon Majors” cases, were initially tied up in removal battles. More recently, though, the government plaintiffs have succeeded in returning the suits to state courts to proceed on the merits.7 The first Carbon Majors lawsuits may reach trial this year, perhaps led by a lawsuit filed by Honolulu County against Sunoco.8

But the Carbon Majors are not the only central actors driving the warming climate. Other greenhouse gases (GHGs), including methane and nitrous oxide, have shorter atmospheric lifespans than CO₂ but significantly stronger warming effects.9 Reducing fossil fuel use without addressing other major sources of these largely neglected GHGs will not achieve necessary reductions of either near-term or long-term warming.10 The world is thus “simultaneously in two races to avert climate catastrophe.”11


9. See discussion infra Part II.


The United Nations (U.N.) Environment Programme (UNEP) has identified rapidly reducing methane as likely the strongest action available to slow climate change and limit its consequences in the near term.\(^{12}\) Animal agriculture is a significant emitter of GHGs overall (emitting eleven to twenty percent of the global total)\(^ {13}\) and an especially important source of methane: the industry is responsible for nearly one-third of all anthropogenic methane emissions.\(^ {14}\) As with the Carbon Majors, emerging research points to a handful of meat and dairy companies’ predominant role in methane emissions. A 2022 report found that the combined methane emissions of five of the world’s largest meat companies and ten of the largest dairy companies “far exceed the entire methane footprint of many countries” and “equate[] to over 80% of the European Union’s entire methane footprint.”\(^ {15}\)

Despite its outsize emissions, animal agriculture has long escaped most litigants’ notice. But in jurisdictions around the world, the industry has begun to face serious legal challenges premised on its significant role in driving climate change. While many of these cases rely on statutory protections, such as a French corporate due diligence statute or Danish consumer fraud regulations, others look to the common law as a promising avenue, as in a New Zealand climate tort lawsuit against a major dairy distributor and its primary supplier.\(^ {16}\) Courts have recently issued favorable decisions for the plaintiffs in both the New Zealand\(^ {17}\) and Danish\(^ {18}\) cases, underscoring the

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13. See infra notes 22–24, 26 and accompanying text for a discussion of the range of estimates.


16. See discussion infra Part III.

17. See infra notes 121–135 and accompanying text (discussing the New Zealand Supreme Court’s February 2024 rejection of a motion to dismiss, allowing all of the claims to proceed).

18. See infra notes 99–102 and accompanying text (discussing the Danish intermediate court’s March 2024 finding that a large pork producer had unlawfully misled consumers with its “climate-controlled pig” campaign).
potential viability of this emerging genre of climate litigation.

Even as such litigation has moved forward in foreign courts, it has remained largely—although not entirely—untried in the United States. That may now be changing, as evidenced by the New York Attorney General’s prominent consumer protection lawsuit filed against the meat giant JBS in early 2024.\textsuperscript{19} This Article documents this emerging U.S. current of climate change and animal agriculture litigation and considers how litigants might increase its momentum in the future. These questions are particularly important given the magnitude of U.S. animal agriculture’s externalized harms and its virtual immunity from existing federal and state climate change regulation in the United States.\textsuperscript{20}

Part II briefly explains the significant contributions animal agriculture makes to climate change and the insufficient regulation and corporate action that have thus far been addressed to mitigating them. Part III, a first-of-its-kind comparative survey, highlights the most consequential legal challenges to animal agriculture’s climate contributions to date. Many of the legal theories animating these extant cases in other countries are likely invocable in U.S. courts, though some may push the doctrinal boundaries of constitutional, statutory, or common law.

As Part IV shows, the relationship between climate change and animal agriculture in fact already features in some U.S. litigation, especially in suits challenging government actions that buttress the industry. A greater focus on animal agriculture as a target in U.S. climate litigation may now be emerging. With lessons and favorable precedent drawn from both foreign and U.S. case law, Part V charts a variety of strategic courses that litigants who seek to address animal agriculture’s climate harms might consider. Given the United States’ outsized role in the global animal agriculture industry, such litigation—whether successful in court, the court of public opinion, or both—could prove a powerful driver of climate change adaptation and mitigation in the years to come. A spate of “Methane Majors” cases may be on the horizon.\textsuperscript{21}

\textsuperscript{19} See infra notes 262–263 and accompanying text.

\textsuperscript{20} See infra notes 45–52 and accompanying text.

\textsuperscript{21} While this Article focuses on animal agriculture—the largest sectoral source of methane emissions in the United States—climate litigation could also increasingly target other major methane sources, including natural gas systems and landfills, among others. U.S. ENV’T PROT. AGENCY, EPA 430-R-23-002, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2021,
II. ANIMAL AGRICULTURE’S UNDERREGULATED EMISSIONS

Animal agriculture is estimated to account for some eleven to twenty percent of total global anthropogenic GHG emissions, as shown in Table 1 below.\(^{22}\) While the U.N. Food & Agriculture Organization’s (FAO) latest figure put livestock emissions at about 11 percent of the global total,\(^{23}\) that number is likely an underestimate; other prominent estimates range from at least 14.5% to as high as nearly 20% of all global emissions.\(^{24}\)


\(^{24}\) See, e.g., Blaustein-Rejto & Gambino, supra note 22 (noting that “FAO's [recent] analysis has several limitations and uncertainties,” and that it may not accurately estimate GHG emissions of grazing and the impacts of deforestation and land-use change); Matthew N. Hayek & Scott M. Miller, Underestimates of Methane from Intensively Raised Animals Could Undermine Goals of Sustainable Development, 2021 ENVIрон. RES. LETT. 16, 7 (2021); see also Richard Twine, Emissions from Animal Agriculture—16.5% Is the New Minimum Figure, 13 SUSTAINABILITY 1 (2021) (identifying flaws and inconsistencies that led to the understatement of animal agriculture’s emissions contribution in FAO’s previous estimates). Some observers have raised concerns about the decrease in the FAO estimates over time, with ex-FAO officials complaining of pressure from industry groups. Arthur Neslen, Ex-Officials at UN Farming Body Say Work on Methane Emissions Was Censored, GUARDIAN (Oct. 20, 2023), https://www.theguardian.com/environment/2023/oct/20/ex-officials-at-un-farming-fao-say-work-on-methane-emissions-was-censored [https://perma.cc/H3FL-8VJJ]; GRAIN & INST. FOR AGRIC. & TRADE POL’Y, EMISSIONS IMPOSSIBLE: HOW BIG MEAT AND DAIRY ARE HEATING UP THE PLANET (July 18, 2018), https://grain.org/article/entries/5976-emissions-impossible-how-big-meat-and-dairy-are-heating-up-the-planet [https://perma.cc/2TL6-4ERA] [hereinafter EMISSIONS IMPOSSIBLE MEAT AND DAIRY]. The FAO noted in a December 2023 report that both its own modeling approach and the estimates “published in current literature” produce “fairly similar” results that together “suggest that the contribution of livestock to total anthropogenic emissions is 12 to 16 percent.” PATHWAYS TOWARDS LOWER EMISSIONS, supra note 23, at 8. Even if the FAO’s estimate of net GHG emissions is correct, it may still underestimate the importance of animal agriculture to the climate because of the carbon opportunity cost of land use for animal agriculture. If land currently devoted to grazing livestock and growing animal feed were restored to native ecosystems, the resulting carbon sequestration in soil and vegetation could offset about
At any of these levels, animal agriculture’s emissions are significant. Even if GHG emissions from fossil fuels were rapidly reduced, “global food system emissions”—which are largely driven by animal agriculture—would still impede achievement of the Paris Agreement’s 1.5°C target.25

Table 1: Prominent Estimates of Livestock GHG Emissions in CO2 Equivalents as a Percentage of Global Emissions26

<table>
<thead>
<tr>
<th>Source (Year of Publication)</th>
<th>Estimate (%)</th>
<th>Period of Emissions Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAO (2023)</td>
<td>11.2</td>
<td>2015</td>
</tr>
<tr>
<td>FAO (2013)</td>
<td>14.5</td>
<td>2005</td>
</tr>
<tr>
<td>FAO (2017)</td>
<td>15.6</td>
<td>2010</td>
</tr>
<tr>
<td>Xu et al. (2021)</td>
<td>19.6</td>
<td>2007–2013</td>
</tr>
</tbody>
</table>


26. The examples in Table 1 are drawn from a survey by Dan Blaustein-Rejto and Chris Gambino of the Breakthrough Institute, supra note 22. Each study provides estimates of animal agriculture sector emissions, allowing Blaustein-Rejto and Gambino to calculate them as a percentage of the global total. The cited FAO studies are Pathways Towards Lower Emissions, supra note 23, at 4 (estimating livestock emissions as 12% of 2015 global emissions); P.J. Gerber et al., Food and Agric. Org. of the United Nations, Tackling Climate Change Through Livestock xii, 15 (2013), https://www.fao.org/3/i3437e/i3437e.pdf [https://perma.cc/NS5P-CGRE] [hereinafter TACKLING CLIMATE CHANGE] (estimating livestock emissions as 14.5% of 2004 global emissions); Food and Agric. Org. of the United Nations, Livestock’s Long Shadow: Environmental Issues and Options xxi, 112 (2006), https://www.fao.org/3/a0701e/a0701e.pdf [https://perma.cc/TF32-BAVC] [hereinafter LIVESTOCK’S LONG SHADOW] (estimating livestock emissions as 18% of global total emissions). The two non-FAO studies cited are Xiaoming Xu et al., Global Greenhouse Gas Emissions from Animal-Based Foods Are Twice those of Plant-Based Foods, 2 Nature Food 724 (2021), and J. Poore & T. Nemecek, Reducing Food’s Environmental Impacts Through Producers and Consumers, 360 Science 987 (2018). Blaustein-Rejto and Gambino calculate that Xu et al.’s estimate would drop to 16.1% of global emissions if CO2 emissions from grazing land management were excluded. Blaustein-Rejto & Gambino, supra note 22.
In the United States, according to the U.S. Environmental Protection Agency (EPA), agriculture (excluding land conversion and fossil-fuel combustion) produces about one-tenth of GHG emissions. Animal agriculture, including feed production, is responsible for almost 80% of all U.S. agricultural emissions. The United States is the world’s largest producer of beef and veal (about 20% of the global total) and chicken (over 20%), and the third-largest producer of pork (about 11%). The industry claims the lives of staggering numbers of animals: in 2022, at least 34 million cattle and calves, 125 million hogs, and 9.5 billion chickens were slaughtered at U.S. plants.

The industry produces GHGs in multiple ways. While enteric fermentation (the digestive process by which ruminant animals—such as cattle, sheep, and goats—produce methane) is especially notable, farming any animal (including non-ruminants, such as chickens) results in significant emissions from sources including land use changes, manure management, and the aforementioned production of feed. While animal agriculture is responsible for significant CO₂ emissions, its emissions of the climate super-pollutants nitrous oxide and methane are of particular concern, due primarily to their potency as warming agents. Nitrous oxide—more than half of which is at-

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27. LEHNER & ROSENBERG, supra note 25, at 41.
28. EPA INVENTORY, supra note 21, at 2-21.
29. LEHNER & ROSENBERG, supra note 25, at 43.
32. LIVESTOCK’S LONG SHADOW, supra note 26, at xxi; Shi Feng et al., A Comprehensive Continental-Scale Analysis of Carbon Footprint of Food Production: Comparing Continents Around the World, 426 J. CLEANER PROD. 1, 1 (2023) ("The average carbon footprint of plant-based foods amounts to . . . only 10.7% of animal-based foods[.]"); Michael Dent, The Meat Industry Is Unsustainable, IDTECHEx (Mar. 25, 2020) https://www.idtechex.com/en/research-article/the-meat-industry-is-unsustainable/20231 [https://perma.cc/AH44-KH57] (“Chicken is the most efficient form of meat, but still requires 9 calories of energy to produce 1 calorie of meat and 5 g of protein to produce 1 g of protein. Pork is less efficient, requiring 10 calories of feed to produce 1 calorie of meat.”). Chicken production is a significant driver of other environmental problems, including aquifer depletion. See, e.g., Christopher Flavelle, How America’s Diet Is Feeding the Groundwater Crisis, N.Y. TIMES (Dec. 24, 2023), https://www.nytimes.com/interactive/2023/12/24/climate/groundwater-crisis-chicken-cheese.html [https://perma.cc/YYM6-VHRK].
tributable to livestock production, according to a U.N. estimate—is
around 280 times more powerful than carbon dioxide as a warming
agent during its first twenty years in the atmosphere. Animal agri-
culture is responsible for approximately 36% of anthropogenic me-
thane emissions in the United States, and about a third globally.
Methane is about 80 times more potent than carbon dioxide during
its first twenty years in the atmosphere. But, while carbon dioxide
can persist for hundreds or even thousands of years and nitrous oxide
for about 120 years, the average methane molecule exists in the
atmosphere for only about a decade. This presents an exceptional
mitigatory opportunity that has brought the need to rapidly reduce
methane emissions into increasing focus. Per UNEP:

Methane has accounted for roughly 30 per cent of global warming
since pre-industrial times and is proliferating faster than at any other
time since record keeping began in the 1980s...[R]educing methane
emissions now would have an impact in the near term and is critical
for helping keep the world on a path to 1.5°C.

As one of the lead reviewers of the U.N. Intergovernmental Panel
on Climate Change’s Sixth Assessment Report observed: “Cutting me-
thane is the biggest opportunity to slow warming between now and
2040.” Because both methane and nitrous oxide decay relatively
rapidly as compared to CO², a “global phaseout” of animal agriculture
over the next fifteen years “would have the same effect, through the

33. TACKLING CLIMATE CHANGE, supra note 26, at 15 (relying on 2004 and 2005 data).
34. Piers Forster et al., The Earth’s Energy Budget, Climate Feedbacks and Climate Sensitivity,
in CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE
SIXTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 923, 1017 (Valé-
35. EPA INVENTORY, supra note 21, at ES-19; LEHNER & ROSENBERG, supra note 25, at 41; Me-
thane Emissions Are Driving Climate Change: Here’s How to Reduce Them, U.N. ENV’T PROGRAMME
UNEP, METHANE EMISSIONS].
36. Forster et al., supra note 34, at 1017.
37. Overview of Greenhouse Gases, ENV’T PROT. AGENCY (Oct. 19, 2023),
https://www.epa.gov/ghgemissions/overview-greenhouse-gases [https://perma.cc/HZ8C-9X7N].
38. Understanding Global Warming Potentials, ENV’T PROT. AGENCY (Apr. 18, 2023),
39. UNEP, METHANE EMISSIONS, supra note 35.
40. Fiona Harvey, Reduce Methane or Face Climate Catastrophe, Scientists Warn, GUARDIAN
end of the century, as a 68% reduction of CO₂ emissions.”

None-the-less, even though scientific agencies have long described the mitigation potential of methane and other potent yet “short-lived climate pollutants,” most mitigation efforts still center on CO₂.

To help fill this policy gap, more than 100 countries have adopted the “Global Methane Pledge,” collectively committing to reduce methane emissions by 30% from 2020 levels by 2030. But animal agriculture has yet to receive commensurate attention, including in the United States, where GHG emissions—methane or otherwise—from animal agriculture operations have been largely unregulated.

In 2010, EPA declined to impose Clean Air Act (CAA) permitting requirements on animal agriculture operations. Beginning that same year, Congress began cementing that exemption with annual appropriations riders prohibiting EPA from requiring animal agriculture operations to obtain CAA permits for GHGs produced by “biological processes associated with livestock production.” The Biden administration’s 2021 methane emissions reduction plan likewise did not regulate animal agriculture, instead focusing on incentive-based and voluntary approaches, and EPA did not address animal agriculture when it strengthened regulation of oil and gas methane emissions in

41. Michael B. Eisen & Patrick O. Brown, Rapid Global Phaseout of Animal Agriculture Has the Potential to Stabilize Greenhouse Gas Levels for 30 Years and Offset 68 Percent of CO₂ Emissions This Century, PLOS CLIMATE 1, 2-3, 7 (2022) (accounting for both the “emission reduction and biomass recovery” that would result from the phaseout of animal agriculture).

42. Dreyfus et al., supra note 10, at 2.


late 2023.\textsuperscript{49} Though the Inflation Reduction Act promises billions of dollars in subsidies for "climate-smart" agriculture,\textsuperscript{50} it does not impose new regulatory constraints on animal agriculture, which is exempt from the methane emissions charge the Act imposes on various types of oil and gas facilities.\textsuperscript{51} Moreover, in contrast to the incentives created under the Act for alternatives to fossil fuels, there are no incentives for alternatives to animal agriculture.\textsuperscript{52}

Limited public awareness enables this lack of action. For example, a 2023 poll found that two-thirds of U.S. voter respondents either did not believe that eating less meat would lower GHG emissions or were not sure.\textsuperscript{53} Media coverage of animal agriculture's climate responsibility has been "historically low,"\textsuperscript{54} even though the individual


\textsuperscript{50} Gabriel Popkin, \textit{The Biden Administration Bets Big on 'Climate Smart' Agriculture}, YALE ENVT 360 (July 13, 2023), https://e360.yale.edu/features/climate-smart-agriculture-usda [https://perma.cc/EGT9-XURZ].


\textsuperscript{52} RAMSEUR, supra note 51; see also Grace van Deelen, \textit{A Year Later, Inflation Reduction Act Lags on Tackling Ag Emissions}, SENTIENT MEDIA (Sept. 28, 2023), https://sentientmedia.org/inflation-reduction-act-ag-emit [https://perma.cc/6CZE-USHT] (describing the urgent need to dramatically reduce methane emissions, especially from leaks in the oil and gas sector).


\textsuperscript{54} Silje Kristiansen et al., \textit{Animal Agriculture and Climate Change in the US and UK Elite Media: Volume, Responsibilities, Causes and Solutions}, 15 ENV'T COMM. 153, 165 (2021); Constanza Arévalo et al., \textit{Animal Agriculture Is the Missing Piece in Climate Change Media Coverage}, SENTIENT MEDIA (May 2023), https://osf.io/q4evn [https://perma.cc/QY4C-54CR].
actors driving the bulk of these emissions are readily identifiable: five of the world’s largest meat and dairy companies combined have been estimated to account collectively for more GHG emissions annually than either Exxon Mobil, Shell, or BP.55 Three of them—Tyson Foods, Cargill, and Dairy Farmers of America—are headquartered in the United States, as is the industry’s sixth-largest emitter, National Beef.56 Tyson’s methane emissions alone rival those of Russia, while Dairy Farmers of America emits about as much methane as the United Kingdom.57 And if global meat production continues to rise as it has for decades,58 emissions are likely to rise as well.59 One analysis of major meat and dairy companies found “a clear lack of leadership and commitment when it comes to reducing methane emissions and contributing to global efforts to avoid the worst impacts of climate change.”60

These corporate actors have dodged scrutiny in part due to industry-funded efforts to influence government policy and public opinion. Front groups and trade associations have lobbied to prevent meaningful regulation, funded research to downplay the industry’s emissions, and conducted sophisticated marketing campaigns to

55. EMISSIONS IMPOSSIBLE MEAT AND DAIRY, supra note 24, at 5.
57. EMISSIONS IMPOSSIBLE METHANE, supra note 15, at 19.
59. A recent analysis showed that twenty of the largest listed meat and dairy producers in the world emitted 3.28% more GHGs in 2023 than in 2022. FAIRR, COLLER FAIRR PROTEIN PRODUCER INDEX 2023/24 at 18 (Nov. 2023), https://go.fairr.org/2023-Coller-FAIRR-Protein-Producer-Index-Report [on file with the Journal]. But that figure is incomplete due to companies’ limited emissions disclosures. Id. at 18. While improvements in the efficacy and uptake of emissions “mitigation measures” could theoretically help reduce emissions even if overall production expands, see id. at 21–22, many such measures remain untested and their feasibility uncertain. Daina Bray, The Climate Problem of Animal Agriculture: What Can Law, Technology, and We Do About It?, 20 ABA SCITECH LAWYER 12, 15 (Fall 2023); see also Julie Creswell, For Many Big Food Companies, Emissions Head in the Wrong Direction, N.Y. TIMES (Sept. 22, 2023), https://www.nytimes.com/2023/09/22/business/food-companies-emissions-climate-pledges.html [on file with the Journal] (“[T]here are bigger questions hanging over the [beef] industry, including whether existing technologies to reduce emissions in cows actually help or whether they are too costly.”).
shape public perceptions of their operations. These tactics have likely delayed the uptake of alternative protein sources, which could dramatically reduce GHG emissions.

The industry’s negative externalities also include other forms of environmental pollution, biodiversity loss, public health risks, animal cruelty, and the exploitation of workers and farmers. Solutions to any one of these problems should be considered holistically with attention to the interests of all stakeholders, including nonhuman animals, to avoid “trading off” one harm for another. Climate change is likely to exacerbate each of these other challenges. For example, climate change, like animal agriculture itself, threatens to exacerbate the risk of zoonotic disease outbreaks. Meanwhile, the interaction of extreme weather (made more likely by climate change) and indus-


63. See Eisen & Brown, supra note 41, at 7; see also Peter Scarborough et al., Vegans, Vegetarians, Fish-Eaters and Meat-Eaters in the UK Show Discrepant Environmental Impacts, 4 NATURE FOOD 565, 566 (2023) [estimating that, compared to plant-based diets, diets high in meat consumption produce 15.3 times more methane and 3.6 times more nitrous oxide].


trial animal agriculture raises troublesome environmental justice implications because large-scale animal agriculture facilities are often sited in low-income communities and communities of color. Neighbors of such facilities face serious health risks during and after heavy rainfall events, which can cause manure overflow and other discharges that contaminate surface and groundwater.

Despite its significant climate responsibility and the availability of lower-emission alternatives, animal agriculture has so far avoided public condemnation and meaningful regulatory oversight of its climate impacts, preserving itself as “the biggest source of emissions that doesn’t have a target on its back.” A new generation of climate litigation seeks to change that.

III. THE GLOBAL VANGUARD OF CLIMATE CHANGE AND ANIMAL AGRICULTURE LITIGATION

In many jurisdictions, the persistently inadequate regulation of GHG emissions has inspired a “turn to the courts,” with advocates looking to climate litigation as a “regulatory tool” to increase the urgency and ambition of government and private-sector action. This strategy has proven effective. To date, more than half of judicial decisions rendered in climate cases around the world have been favorable to climate action. Moreover, climate litigation may have bene-

ficial “indirect impacts” even when courts ultimately reject plaintiffs’ claims.\textsuperscript{71} Litigation can raise awareness and shape public narratives, thereby encouraging action by policymakers and markets.\textsuperscript{72} The adjudication of a lawsuit may reveal or generate actionable information about climate change’s causes, costs, and solutions.\textsuperscript{73} The ongoing development of attribution science to prove causation of and allocate liability for climate harms is likely to facilitate additional growth and courtroom success.\textsuperscript{74}

At the same time that increasingly creative lawsuits relating to the climate impacts of fossil fuels and other heavy emitting sectors are multiplying around the world,\textsuperscript{75} animal agriculture has come into focus as a major emissions contributor in its own right.\textsuperscript{76} Although climate activists and lawyers in the United States and abroad are paying increasing attention, the range of potentially effective legal challenges to animal agriculture firms and their backers remains underexplored. This is especially notable given that litigation targeting and arguments at pivotal trials and hearings. Landmark rulings marked progress in holding governments to account for climate inaction or denial, and new climate cases continued to be filed.\textsuperscript{77a}.

\textsuperscript{71} SETZER \& HIGHAM, supra note 70, at 5. To the extent litigation is “multidimensional” and involves “a variety of audiences” from activists and consumers to students and elected officials, even “litigation loss” may generate new opportunities for advocates to mobilize public support or “appeal to other potential social-change agents.” Douglas NeJaime, Winning Through Losing, 96 IOWA L. REV. 941, 947–48 (2010).


\textsuperscript{73} Aisha I. Saad, Attribution for Climate Torts, 67 BOSTON COLLEGE L. REV. 867, 923 (2023).

\textsuperscript{74} Id. at 972; see also Wentz et al., supra note 4, at 3.

\textsuperscript{75} See supra notes 4–8 and accompanying text; cf. B. Ekwurzel et al., The Rise in Global Atmospheric CO\textsubscript{2}, Surface Temperature, and Sea Level from Emissions Traced to Major Carbon Producers, 144 CLIMATIC CHANGE 579, 588 (2017) (building on the Carbon Majors emissions analysis by modeling those emissions’ climate impacts, while noting that “ethical, legal, and historical considerations may further inform discussions about carbon producer responsibilities to contribute to limiting climate change through investment in mitigation, support for adaptation, and compensation for climate damages”).

\textsuperscript{76} See discussion supra Part II.
fossil fuels has already found success and attracted significant philanthropic support.\footnote{\textsuperscript{77} See supra note 70 and accompanying text; Camilla Hodgson, \textit{The Money Behind the Coming Wave of Climate Litigation}, \textit{Financial Times} (June 5, 2023), \url{https://www.ft.com/content/055e9f4-5fb7-4746-bebd-7bfa00b203b2} \cite{https://perma.cc/64EC-V6HT}.}

Several factors may help explain the disparity. Perhaps most fundamentally, \textit{“CO\textsubscript{2} from fossil fuels combustion and industrial processes”} remains the largest source of GHG emissions driving anthropogenic warming.\footnote{\textsuperscript{78} See Intergovernmental Panel on Climate Change, Climate Change 2023 Synthesis Report 4 (2023), \url{https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_FullVolume.pdf} \cite{https://perma.cc/968X-VL7W}.} Though animal agriculture has been publicly and reliably linked to climate change since at least 2006,\footnote{\textsuperscript{79} See Intergovernmental Panel on Climate Change, Climate Change: The IPCC 1990 and 1992 Assessments 57 (1992), \url{https://www.ipcc.ch/site/assets/uploads/2018/05/ipcc_90_92_assessments_far_full_report.pdf} \cite{https://perma.cc/ZN7U-RPP9}. Scientists had already linked climate change to fossil fuels decades earlier. See Ian Sample, \textit{The Father of Climate Change}, \textit{Guardian} (June 30, 2005), \url{https://www.theguardian.com/environment/2005/jun/30/climatechange.climatechangeenvironment2} \cite{https://perma.cc/QTH8-6CVQ}.} scientific understanding and public awareness of the role of fossil fuels are even more robust and longstanding.\footnote{\textsuperscript{80} For example, from its inception, the U.N. Intergovernmental Panel on Climate Change underscored fossil fuel combustion’s outsized contributions to anthropogenic GHG emissions. See Intergovernmental Panel on Climate Change, Climate Change: The IPCC 1990 and 1992 Assessments 57 (1992), \url{https://www.ipcc.ch/site/assets/uploads/2018/05/ipcc_90_92_assessments_far_full_report.pdf} \cite{https://perma.cc/ZN7U-RPP9}. Scientists had already linked climate change to fossil fuels decades earlier. See Ian Sample, \textit{The Father of Climate Change}, \textit{Guardian} (June 30, 2005), \url{https://www.theguardian.com/environment/2005/jun/30/climatechange.climatechangeenvironment2} \cite{https://perma.cc/QTH8-6CVQ}.} And even though the mechanisms by which animal agriculture emits GHGs have long been understood, some lawyers may perceive those pathways as more difficult to explain to a trier of fact than those of fossil fuels.\footnote{\textsuperscript{81} Cf. New York Times Climate Desk, \textit{Have Climate Questions? Get Answers Here}, \textit{N.Y. Times} (updated Sept. 6, 2023), \url{https://www.nytimes.com/interactive/2023/climate/climate-change-faq.html} \cite{https://perma.cc/286Q-7S7F}. (discussing how “ranching and animal agriculture affect climate change,” with no analogous explanation dedicated to fossil fuels).} At the same time, the cultural meaning ascribed to animal agriculture and its products makes challenges to the industry fraught. Some environmental groups may be wary of alienating either courts or the public with what might be seen as a too-close-to-home condemnation of personal dietary choices.\footnote{\textsuperscript{82} Linnea I. Laestadius et al., \textit{No Meat, Less Meat, or Better Meat: Understanding NGO Messaging Choices Intended to Alter Meat Consumption in Light of Climate Change}, 10 ENV’T COMM. 84, 88 (2014) (summarizing literature suggesting that “NGOs may be reluctant to promote the message that environmentalists should not eat meat” given “the potential unpopularity of messages focused on meat-free diets” and “the cultural significance” and “symbolic nature of meat consumption”); David Rooney & Courtney Dillard, \textit{Mercy for Animals Willing but Uncertain: Exploring Hesitations, Motivations and Perceptions of Animal Agriculture Advocacy from a Nationwide Survey of Environmental Organizations} (Nov. 2023), \url{https://go.mercyforanimals.org/l/939853/2023-11-30/4945y/939853/1701366193YwNkys1l/Willing_but_Uncertain.pdf} \cite{https://perma.cc/286Q-7S7F}.} Likewise, ubiquitous narratives of
traditional, small-scale, widespread, and decentralized agriculture have obscured the true extent of mechanization and market concentration in the industry,\textsuperscript{83} potentially dissuading would-be plaintiffs who fear antagonizing largely mythic family farmers and prefer the dualistic satisfaction of suits against more thoroughly unsympathetic fossil fuel defendants.\textsuperscript{84}

Scholarly literature analyzing climate change litigation globally reflects animal agriculture’s relatively minor role in climate lawsuits to date,\textsuperscript{85} but the landscape is starting to change. As Table 2 suggests, climate change and animal agriculture litigation, while still nascent, is diverse and wide-ranging. In recent years, plaintiffs around the world have brought climate-focused claims against private actors involved in animal agriculture.\textsuperscript{86} Allegations related to animal agriculture also feature in a variety of complaints against inadequate policy responses to climate change, which plaintiffs often characterize as violations of constitutional or statutory rights or international legal obligations.\textsuperscript{87} Future litigants concerned with animal agriculture and climate change are likely to derive important strategic insights from these early cases, which are discussed in greater detail below.

To delineate the scope of this discussion, this Article relies first on the same criterion used by the Sabin Center for Climate Change Law

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{83} See \textit{Ingolf Vogeler, The Myth of the Family Farm: Agribusiness Dominance of U.S. Agriculture} 6 (1981); \textit{cf.} Hannah Ritchie, \textit{How Many Animals Are Factory Farmed?}, \textit{Our World in Data} (Sep. 25, 2023), https://ourworldindata.org/how-many-animals-are-factory-farmed [https://perma.cc/88G9-H37B] (citing estimates based on USDA data that 99% of U.S. livestock animals are raised on industrial-scale concentrated animal feeding operations, or “CAFOs,” as defined by the EPA, including 70% of cows, 98% of pigs and egg-laying hens, 99.9% of turkeys, and 99.97% of broiler (meat) chickens).
  \item \textsuperscript{84} In a 2023 Gallup poll, 59% of respondents expressed a positive view of the U.S. “farming and agriculture” sector, versus just 24% for the “oil and gas industry.” \textit{Business and Industry Sector Ratings}, \textit{Gallup} (Aug. 2023), https://news.gallup.com/poll/12748/business-industry-sector-ratings.aspx [https://perma.cc/XVV9-F5GM].
  \item \textsuperscript{86} See infra Sections III(A)–(C), IV(C).
  \item \textsuperscript{87} See infra Sections III(D), IV(A)–(B).
\end{itemize}
\end{footnotesize}
and UNEP, defining climate change litigation to include “cases that raise material issues of law or fact relating to climate change mitigation, adaptation or the science of climate change.” To be included here, such cases must also implicate animal agriculture—for example, as an activity the defendant benefits from or participates in, or as the subject of contested government action (or inaction). Given the novel character of the field, this Article errs on the side of overinclusion, though it generally excludes litigation that makes “only a passing reference” to climate change or animal agriculture.

**Table 2: Early Examples of Climate Change and Animal Agriculture Litigation**

<table>
<thead>
<tr>
<th>Case (Jur., Year Filed)</th>
<th>Category^</th>
<th>Claims</th>
<th>Latest Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith v. Fonterra Coop. (N.Z., 2019)</td>
<td>Tort</td>
<td>Common law torts based on dairy firms’ GHG emissions, including negligence, public nuisance, and breach of a “novel” climate duty</td>
<td>Proceeding to trial after Supreme Court reinstated plaintiff’s claims in 2024</td>
</tr>
<tr>
<td>Envol Vert v. Casino Guichard-Perrachon (Fr., 2021)</td>
<td>Cross-Border Theories</td>
<td>Inadequate environmental (including climate) and human-rights due diligence of beef supply chains, violating statutory “duty of vigilance”</td>
<td>Mediation declined; hearings began in 2023</td>
</tr>
<tr>
<td>Vegetarian Society of Denmark v. Danish Crown (Den., 2021)</td>
<td>Consumer Protection</td>
<td>Misrepresenting climate impact of pork products in violation of Marketing Practices Act</td>
<td>In 2024, High Court deemed “climate-controlled pig” claim to have violated marketing laws</td>
</tr>
<tr>
<td>Global Feedback Ltd. v. Secretary of State (U.K., 2022)</td>
<td>Claims Against Government</td>
<td>Procedural defects in the development of the National Food Strategy, which did not address GHG emissions associated with meat and dairy</td>
<td>Appeals Court ruled in the government’s favor in 2023</td>
</tr>
</tbody>
</table>

88. See BURGER ET AL., supra note 5, at 3 (Box 1: Defining Climate Change Litigation).
89. In addition to livestock production itself, animal agriculture as understood in this Article includes other elements of the animal product supply chain, such as public and private investment, feed production, slaughter and processing, and retail distribution.
| Comissão Pastoral da Terra v. BNP Paribas (Fr., 2022) | Cross-Border Theories; Financial Claims | Deficient due diligence by major bank in financing foreign meatpacker despite its history of environmental and human-rights abuses | Deemed inadmissible on procedural grounds; related complaint seeking criminal enforcement pending with French national prosecutor |
| People v. JBS USA Food Co. (U.S., 2024) | Consumer Protection | Inadequately supported climate mitigation (including net-zero commitments in violation of New York State consumer protection laws | Lawsuit recently filed by N.Y. Attorney General; industry self-regulatory bodies previously found against JBS on related greenwashing complaints |

* Each of the cases listed in Table 2 is discussed in more detail infra Parts III and IV.
^ Categories correspond to Section headings in Part V.

Each legal system is distinct; a comparative survey is unlikely to deliver easy solutions ready for immediate implementation in the United States, though some “legal transplants” can and do succeed. Nonetheless, as a means of illuminating possibilities and potential obstacles that may emerge (however modified) in U.S. jurisdictions, comparative study is an essential point of departure—especially in the dynamic realm of climate litigation.

As described in this Part, courts have generally been willing to recognize animal agriculture as a significant source of GHG emissions, particularly in suits applying existing regulatory and statutory provisions. Recognition of associated liability could follow, especially if advocates continue to adapt promising litigation strategies to new jurisdictions. We return to this latter prospect in Parts IV and V, which together show that key legal theories remain underutilized, if not entirely untested, in the United States.

In light of litigation’s limitations, this Article also looks beyond the courtroom to consider non-judicial legal mechanisms for encouraging industry reform or demanding government enforcement action, which climate advocates are already using. These alternatives,

92. See Michael Mehling, The Comparative Law of Climate Change: A Research Agenda, 24 REV. EUROPEAN, COMPAR. & INT’L ENVT’L L. 341, 346–47 (2015) ("[I]f law is to expand our understanding of the possibilities for addressing climate change, we should broaden the analysis to encompass as many different experiences and circumstances as possible, fostering a high level of policy learning and diffusion, and helping avoid costly mistakes.").
though usually voluntary and non-binding on the firms or agencies targeted, may still allow participants to exert influence over public discourse and market conduct.

A. Correcting Meat and Dairy’s Climate Misrepresentations

In a few early cases, animal agriculture companies have started to face consumer protection claims aimed at their climate misrepresentations. The earliest major lawsuit in this arena targeted Danish Crown, a major processor of pork (the European Union’s largest) and beef, whose global emissions are the equivalent of nearly one-third of Denmark’s national total. In May 2021, in response to a “climate-controlled pig” promotional campaign, three Danish non-governmental organizations (NGOs) sued Danish Crown for misleading consumers by allegedly misrepresenting the carbon footprint of its products in violation of Denmark’s Marketing Practices Act. Following the lawsuit’s filing, Danish Crown announced it was ending the use of the “climate-controlled pig” label on its packaging, though it continued to use that terminology on its website and to defend the campaign as an effort to communicate that its pig suppliers were “actively working to lower their CO2 footprint.”


95. Lazarus et al., supra note 56, at 6.


Despite Danish Crown’s efforts to have the case heard by the lower, more specialized Maritime and Commercial Court, proceedings began in January 2022 in the intermediate Western High Court, which characterized the case as significant “for the application and development of the law.”

Testifying at trial in November 2023, a former Danish Crown director revealed that the firm had launched the “climate-controlled pig” campaign without being able to guarantee that products bearing that label had actually been produced using special climate mitigation measures. Another witness, the firm’s sustainability director, “admitted that the soy feed given to animals is not all deforestation-free.” In a March 2024 ruling, the High Court found that Danish Crown had unlawfully misled consumers with its “climate-controlled pig” campaign, though it suggested that future uses of the term might be permissible if adequately supported by emissions reductions.

Danish Crown appears to have been the first in a trend. Sweden’s consumer protection agency subsequently brought a case against major European dairy producer Arla Foods, whose global GHG emissions are projected to amount to more than 60 percent of Denmark’s entire Nationally Determined Contribution under the Paris Agreement in 2030. The Swedish Patent and Market Court enjoined the firm from marketing dairy products as having a “net-zero climate footprint.” The court found that “the expression 'net zero climate
footprint’ and similar claims in the marketing of dairy products” misled consumers, notwithstanding Arla’s claim that its “promise of net zero [was] based on climate-compensating activities.” Arla, which under the Swedish court’s judgment faces a fine of nearly 100,000 U.S. dollars if it violates the injunction, has discontinued its net-zero advertising. As discussed below, after some delay, a similar case has now emerged in the U.S. context against JBS, another major emitter.

B. Animal Agriculture’s Climate Liability at Common Law

Given the vast number of contributors, past and present, to climate change, asserting the direct liability of any individual emitter is a serious but not insurmountable challenge. Of particular relevance to this discussion, a recent decision from the Supreme Court of New Zealand rejected an effort to dismiss climate tort claims against a group of major emitters that includes two animal agriculture companies, allowing the claims to proceed to the merits.

In Smith v. Fonterra Co-operative Group Limited, filed in New Zealand in 2019, the climate change spokesperson for the Iwi Chairs’ Forum (a Māori advocacy coalition) challenges New Zealand’s seven largest greenhouse gas emitters for their contributions to climate change, including two animal agriculture firms: Fonterra Co-Operative Group Limited and Dairy Holdings Limited. The former is a New Zealand-based, multinational, publicly traded manufacturer and distributor of dairy products, the ninth largest dairy company in

106. Coyne, supra note 104.
107. See infra notes 262–263 and accompanying text.
108. Lazarus et al., supra note 56, at 13 (predicting JBS’s global emissions will be equivalent to about 19% of Brazil’s Nationally Determined Contribution (NDC) under the Paris Agreement by 2030).
the world; the latter is New Zealand’s largest dairy farm operator and Fonterra’s primary milk supplier and shareholder.\(^{111}\) Smith’s allegations against Dairy Holdings are explicitly based on emissions from livestock.\(^{112}\)

Emphasizing the risks posed by climate change to Māori communities’ customary interests in coastal lands, Smith pled three tort causes of action: negligence, public nuisance, and a novel “proposed climate system tort” entailing a legally cognizable duty “to cease materially contributing to: damage to the climate system; dangerous anthropogenic interference with the climate system; and the adverse effects of climate change.”\(^{113}\) In addition to declarations of liability, Smith sought injunctions “requiring the respondents to produce or cause a peaking of their emissions by 2025, a particularised reduction in their emissions by the ends of 2030 and 2040 . . . and zero net emissions by 2050”—or, in the alternative, “a (potentially suspended) injunction requiring the respondents to immediately cease” their “net emissions.”\(^{114}\)

In response to defendants’ application to “strike out” (i.e., dismiss) the proceeding, the trial court held that the novel breach of duty claim (but not the negligence or nuisance claims) should be explored at trial.\(^{115}\) The Court of Appeal, however, subsequently dismissed all three causes of action.\(^{116}\) The appellate court reasoned that the negligence claim failed for want of “causal proximity” between Smith and the respondents, noting its wariness of subjecting a potentially “limitless” class of defendants “to indeterminate liability . . . on an


\(^{112}\) Smith v. Fonterra Coop. [2020] NZHC 419 at [6c] (“[Dairy Holdings] operates a large number of dairy farms . . . . Livestock on its farms release greenhouse gases as a result of enteric fermentation. Nitrogen dioxide is also released from nitrogen-based fertiliser use.”). As to Fonterra, Smith’s complaint focused instead on the cooperative’s coal-powered factories. Id. at [6a] (“Fonterra owns and operates dairy factories . . . that burn coal to generate energy. Fonterra will continue to burn coal in its factories for the foreseeable future. The combustion of coal releases greenhouse gases.”).

\(^{113}\) Smith v. Fonterra Coop. [2024] NZSC 5 at [4, 7].

\(^{114}\) Id. at [12].

\(^{115}\) Smith v. Fonterra Coop. [2020] NZHC 419 at [103].

\(^{116}\) Smith v. Fonterra Coop. [2021] NZCA 552.
unprecedented scale.” A similar concern guided the Court of Appeal in its dismissal of the public nuisance claim, which it found was “untenable”—even under a relatively permissive “nuisance due to many” framework—given the practically infinite and not readily identifiable number of contributors to Smith’s claimed harm. Finally, although the trial court had declined to rule out the proposed climate system damage tort as a possible “evolution of the law of torts,” the Court of Appeal dismissed that claim as a “bare assertion,” the recognition of which would be “contrary to the common law tradition.” Instead, the Court of Appeal asserted, climate change requires “a sophisticated regulatory response at a national level.”

In a “breakthrough” decision issued in February 2024, the Supreme Court differed, reinstating Smith’s suit and allowing all three causes of action to proceed to trial. In its decision, the Court focused primarily on the public nuisance cause of action, finding that Smith had a tenable claim to standing under the “special damage” rule based on alleged “damage to coastal land . . . in which he and others he represents claim both a legal interest and distinct tikanga interests.” That conclusion has dual significance. First, it affirms the notion—central to much climate litigation across diverse jurisdictions—that, “[w]hile the effects of human-caused climate change are ubiquitous and grave for humanity, their precise impact is distributed and different.” Second, it reinforces the legitimacy and

117. Id. at [103, 116]. The lower court had attributed its rejection of the negligence claim to a lack of “reasonable foreseeability,” but the Court of Appeal disagreed, holding the foreseeability of emissions’ climate impacts to be (unlike proximity) “a trial issue.” Id. at [100].
118. Id. at [88–93]. The lower court had relied on the “special damage” rule, which precludes advancement of a public nuisance claim absent “particular” and “direct” harm, but the Court of Appeal rejected the lower court’s “but for” causational analysis as unduly restrictive. Compare Smith v. Fonterra Coop. [2020] NZHC 419 at [62–63] with Smith v. Fonterra Coop. [2021] NZCA 552 at [88–93].
120. Id. at [16].
122. Smith v. Fonterra Coop. [2024] NZSC 5 at [2]. As the court repeatedly noted, its “refusal to strike out a cause of action is not a commentary on whether or not the claim ultimately will succeed.” Id. at [143].
123. Id. at [151–52].
124. Id. at [152].
indeed necessity of judicial “engage[ment]” with “tikanga,” or Māori customary law, in Smith’s case and in New Zealand common law more generally.\(^\text{125}\)

The Supreme Court concluded its public nuisance analysis by addressing the question of causation that had so vexed the Court of Appeal. The Supreme Court analogized climate change to the industrial revolution, “another existential crisis, albeit one of lesser scale,” with which the common law previously grappled, and drew on a series of “waterway cases suggest[ing] . . . that in the case of public nuisance, a defendant must take responsibility for its contribution to a common interference with public rights” notwithstanding “co-contribution or . . . the equivalent acts of others.”\(^\text{126}\) The Court also intimated that, although “Mr. Smith may face obstacles in obtaining any remedy requiring cessation (by injunction),” his claim for equitable (not compensatory) relief might require “a somewhat different approach to connection and causation” than the traditional “attribution of particular loss to a particular action or omission.”\(^\text{127}\) Satisfied that the public nuisance cause of action ought not be struck out, the Court deemed it “neither necessary nor appropriate” for it to “traverse the remaining claims.”\(^\text{128}\) Thus, the negligence claim and the proposed climate system damage tort claim will also proceed to trial.

Throughout the judgment, the Supreme Court appeared to accept—without fanfare—animal agriculture’s presence among the significant sources of anthropogenic GHG emissions complained of in the suit, citing “as common ground” the IPCC’s observations regarding, \textit{inter alia}, atmospheric methane, land use change, and “lifestyle and patterns of consumption and production.”\(^\text{129}\) When the Supreme Court addressed agricultural emissions explicitly, it was to recapitulate Smith’s claim that these emissions “are actually or effectively unconstrained by the current regulatory regime,” since they “are not part of” New Zealand’s Emissions Trading Scheme.\(^\text{130}\) At the time the case was originally filed, methane from agricultural sources—which

\(^{125}\) Id. at [182].

\(^{126}\) Id. at [164].

\(^{127}\) Id. at [171].

\(^{128}\) Id. at [174–76].


\(^{130}\) \textit{Smith v. Fonterra Coop.} [2024] NZSC 5 at [57].
represented over a third of New Zealand’s 2020 GHG emissions—was indeed categorically excluded from the government’s statutory climate change response, leaving a major gap especially ripe for judicial intervention. A since-proposed tax that would narrow the gap by effectively imposing a price on agricultural emissions, including both methane and nitrous oxide, is now delayed until at least 2026. Even if it becomes effective, however, “a pathway” will likely remain “open for the common law to operate, develop and evolve,” because the tax proposal arises under New Zealand’s 2002 Climate Change Response Act—one of the statutes the Supreme Court specifically found in this decision not to have “displaced the law of torts in the realm of climate change.”

C. Duty of Vigilance: Demanding Supply-Chain Due Diligence

In Europe, national and EU laws increasingly recognize private actors’ obligation to conduct supply-chain due diligence. In addition to several commodity-specific due diligence laws proposed or already in force, the European Union may soon impose broad due dili-


135. Smith v. Fonterra Coop. [2024] NZSC 5 at [100–01].

ence obligations on the largest EU companies, requiring them to take steps to avoid adverse human rights and environmental impacts throughout their global operations, including by planning for climate change mitigation.\(^{137}\)

In 2018, France’s sweeping “duty of vigilance” law was the first such law to enter into force.\(^{138}\) The law requires large companies located in France to establish, implement, and publish an annual “vigilance” plan addressing any risks posed by activities undertaken or controlled by the company to human rights, fundamental liberties, and the health and security of persons and the environment.\(^{139}\) The
law, which allows concerned parties to sue to enjoin compliance, requires companies to consider not only their own operations but also those of their subsidiaries, subcontractors, and suppliers.\textsuperscript{140} Regulated firms may incur fault-based civil liability for injuries that can be causally linked to inadequate vigilance,\textsuperscript{141} from the climate and human-rights harms invoked in the cases discussed below to the health and environmental impacts of global plastic pollution alleged in an analogous suit against consumer-goods conglomerate Danone.\textsuperscript{142}

In March 2021, nearly a dozen NGOs, including the environmental group Envol Vert and Indigenous representatives, sued the French retail group Casino. The claimants cited numerous deficiencies in the company’s vigilance plans and alleged the “implication” of Casino and its subsidiaries in systematic environmental and human rights violations caused by livestock operations in Brazil and Colombia.\textsuperscript{143} An Envol Vert investigation had shown that Casino’s meat suppliers were involved in “illegal deforestation and land grabbing practices,” leading to the service of “formal notice to Casino” demanding the adoption of “adequate and effective vigilance measures . . . in its beef supply chains.”\textsuperscript{144} According to the complaint, Casino’s vigilance plans remained insufficient, both in terms of specificity and substance, to address the heightened human, climatic, and ecological risks associated with the cattle industry, including deforestation, forced labor, and the appropriation of Indigenous lands.\textsuperscript{145} Along with other relief, the claimants seek an injunction requiring Casino


\textsuperscript{141}. Corporate Due Diligence Laws, supra note 136, at 2.


\textsuperscript{143}. Assignation at 8, Envol Vert v. Casino Guichard-Perrachon, Saint-Étienne Judicial Court (2021) (Fr.).


\textsuperscript{145}. Assignation at 42, Envol Vert v. Guichard-Perrachon, Saint-Étienne Judicial Court (2021) (Fr.). In addition to the “duty of vigilance” statute, the complaint rests on France’s Environmental Charter (which has been interpreted by the Constitutional Council to impose a general obligation of environmental vigilance) and on provisions of France’s civil code imposing liability for damages caused by an affirmative act or by negligence or recklessness. Id. at 63.
to develop and publish a more robust vigilance plan, with monetary penalties in case of delay,\footnote{Id. at 81–82.} and a court-ordered moratorium on the distribution of Amazonian beef by Casino’s subsidiaries.\footnote{Id. at 82–83.}

net-zero goals. As the demand recounts, Marfrig is one of the world’s top emitters of methane. After this action was deemed inadmissible for lack of formal notice, another group of NGOs filed a new complaint with the French national prosecutor, seeking criminal enforcement against BNP and other French banks alleged to have financed illegal deforestation and thereby engaged in money laundering.

These efforts join challenges brought within Brazil seeking to address the deleterious impacts of cattle supply chains on forests and the climate. In December 2023, Brazil’s Rondônia State brought suits against JBS, a group of cattle suppliers, and three slaughterhouses, seeking damages and fines for the alleged purchase of cattle linked to illegal deforestation. These high-profile provincial cases follow several federally led climate-damage actions against ranchers implicated in similar activities. For example, in April 2021, Brazil’s Ministério Público Federal (MPF) filed a public civil action against the de facto owner of an illicit cattle-ranching operation responsible for the deforestation of thousands of hectares of the Amazon. The MPF, invoking Brazilian forest conservation laws, argued that the defendant should be held strictly liable, not only for deforestation...
but also for the nearly 1.5 million tons of CO₂ emissions released as a result.¹⁵⁹ Soon after the petition’s filing, the federal court in Amazonas State granted a preliminary injunction ordering the removal of all cattle from the affected area and precluding issuance to the defendant of any new licenses for the movement of cattle onto other rural properties.¹⁶⁰ MPF celebrated the decision in a public statement that characterized the civil action as an “unprecedented” effort to ensure accountability for climate damage.¹⁶¹ The Brazilian federal environment agency has filed several similarly climate-focused public civil actions, including a September 2023 case against a rancher alleged to have caused climate damages by illegally degrading the Amazon.¹⁶²

D. Litigation Against Governments¹⁶³

Governments worldwide have faced litigation demanding climate action.¹⁶⁴ Outside of the United States, plaintiffs have linked animal agriculture to climate change in a variety of complaints against governments, typically in the context of broader challenges to insufficiently ambitious climate change policies. For example, when one French environmental NGO filed a *contribution extérieure* (roughly analogous to an amicus brief) asking France’s Constitutional Council to invalidate a 2019 energy and climate change statute, it cited as a key shortcoming the law’s failure to extend its carbon neutrality goals to domains beyond energy, including the agro-industrial sec-

¹⁵⁹. Brazil Petition, supra note 157, at 21. The prosecutor’s emissions estimate does not appear to have included emissions released by the cattle-ranching operation itself. See id. at 20.

¹⁶⁰. TRF-1, Ação Civil Pública Cível No. 1005885-78.2021.4.01.3200, Relator: Ministério Público Federal, 16.04.2021 (Braz.).


¹⁶³. This Section focuses on litigation against governments outside of the United States, whereas Part IV, infra, describes relevant lawsuits involving U.S. government entities.

¹⁶⁴. See BURGER ET AL., supra note 5, at 12–22.

In December 2022, the United Kingdom’s Administrative Court denied a request for judicial review of the latest National Food Strategy, which advocates argued had improperly failed to recommend reductions in meat and dairy consumption in light of “the contribution to greenhouse gas emissions made by the livestock and dairy sections.” The plaintiff NGO Global Feedback had challenged the UK Department for Environment, Food and Rural Affairs’ decision to ignore advice and recommendations from a government-commissioned independent review, including a finding that meat production contributed significantly to global GHG emissions.

Though the Court of Appeal granted permission for judicial review in June 2023, it later ruled that the Climate Change Act on which plaintiffs relied had not obligated the government to take such advice into account. Meanwhile, Global Feedback brought a separate challenge to the government’s inadequate consideration of emissions attributable to meat production in its environmental assessment of the UK Australia Free Trade Agreement, which the High Court has agreed to hear.


166. Decision, Loi relative à l’énergie et au climat, Conseil constitutionnel [CC] [Constitutional Court] decision No. 2019-791DC, Nov. 7, 2019 (Fr.).


169. Id. The Irish High Court (the court of first instance) dismissed an analogous case concerning alleged climate-related deficiencies in Ireland’s “Food Vision 2030” in October 2023. See Friends of the Irish Environment CLG v. Government of Ireland [2023] IEHC 562 (Ir.).


Plaintiffs made similar claims in an action brought against the European Parliament and the Council of the European Union seeking nullification of climate regulations which, according to the plaintiffs, set inadequate emissions reduction targets. The application included an attack on the regulations’ “lack of ambition in the agricultural sector” and argued that, given the magnitude of the European Union’s agriculture emissions (including “nitrous oxide emissions . . . from application and storage of manure, and methane emissions from enteric fermentation from cattle and sheep”), the regulations ought to have placed a higher priority on ”reducing livestock and cropland” and facilitating a “change in consumption patterns.” The Court of Justice of the European Union (CJEU) ultimately dismissed the case as inadmissible for lack of standing. The European Court of Human Rights similarly declared “manifestly inadmissible” a case brought against the United Kingdom for alleged failures “to regulate and take all reasonable steps to safeguard against the risks of factory farming.” That too was a procedural decision; the Court did not reach the case’s substantive merits.

In contrast to the just-mentioned cases that were stymied by procedural obstacles, the CJEU issued a decisive substantive judgment in response to a request for a preliminary ruling made by the Dutch Council of State, the highest administrative court in the Netherlands. The case began when a Dutch NGO, Mobilisation for the Environment, sued the Dutch government for its failure to adequately address what the U.N. Economic Commission for Europe once called “a typically Dutch problem”: the densely urbanized country’s massive amount of nitrogen waste, nearly half of which is attributable to concentrated animal agriculture operations. The

174. The inadmissibility decision in this “Stop Factory Farming” case, Humane Being v. United Kingdom (no. 36959/22), was rendered on the grounds that “the applicants were not sufficiently affected by the alleged breach.” Press Unit, Eur. Ct. of Hum. Rts., Fact Sheet–Climate Change 4 (Jan. 2024), https://www.echr.coe.int/Documents/FS_Climate_change_ENG.pdf [https://perma.cc/56L4-2ZTD].
177. Erik Stokstad, Nitrogen Crisis from Jam-Packed Livestock Operations Has ‘Paralyzed’ Dutch Economy, SCIENCE (Dec. 4, 2019), https://www.science.org/content/article/nitrogen-
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CJEU judgment noted that the majority of Dutch natural protected areas “face a problem of excessive nitrogen deposition,” of which the agricultural sector is the principal source, and held that the EU Habitats Directive precluded the Netherlands from allowing “the application of fertilisers on the surface of land or below its surface and the grazing of cattle” without requiring permits issued pursuant to an “individualised appropriate assessment” of potential environmental consequences.\(^{178}\)

In May 2019, in accordance with the CJEU judgment, the Council of State ruled that the Dutch government’s strategy for mitigating nitrogen emissions violated EU law, including by improperly assuming that the animal agriculture sector, along with other sources, could adequately reduce nitrogen pollution without significant reductions in operational scale.\(^{179}\) The decision “effectively put the granting of permits for . . . enlarging farms on hold.”\(^{180}\) Although primarily aimed at local concerns associated with nitrogen deposition, such as habitat protection, the Dutch government’s responses to the judgment and to the larger problem of nitrogen pollution also explicitly seek to advance national “agriculture-related climate goals.”\(^{181}\) The majority of anthropogenic nitrous oxide emissions are produced when soil or aquatic microbes process excess nitrogen from livestock excreta and synthetic nitrogen fertilizer,\(^{182}\) so the same

\(^{178}\) Case C-293/17, Coöperatie Mobilisation for the Environment UA v. College van Gedeputeerde Staten van Limburg, ECLI:EU:C:2018:882, ¶¶ 69, 120 (Nov. 7, 2018). The CJEU more recently issued a ruling condemning Ireland’s failure to adhere to the Habitats Directive, noting among other things the challenges of “overgrazing” and “agricultural activities causing nitrogen deposition.” Case C-444/21, European Commission v. Ireland, ECLI:EU:C:2023:524, ¶ 117 (June 29, 2023).

\(^{179}\) ABRvS 29 mei 2019, ECLI:NL:RVS:2019:1603 (Stichting Werkgroep Behoud de Peel/College van Gedeputeerde Staten van Noord-Brabant) (Neth.).


\(^{182}\) Klaus Butterbach-Bahl et al., Nitrous Oxide Emissions from Soils: How Well Do We Understand the Processes and Their Controls?, 368 PHIL. TRANSACTIONS ROYAL SOC’Y LONDON, SERIES B, BIOLOGICAL SCI. 1, 1 (2013) (explaining that dominant sources of both anthropogenic and
measures that reduce nitrogen pollution also reduce nitrous oxide emissions.

National regulations to cut the number of farmed animals in the country sparked heated protests by Dutch farmers; with a substantial minority of the Dutch public supporting their cause, that mobilization led to significant electoral success. The controversy, which has jeopardized the timely achievement of the Dutch government’s nitrogen targets, typifies the political conflicts that climate-realistic agricultural policies may provoke throughout Europe and beyond.

In Latin America, plaintiffs have invoked animal agriculture’s contributions to climate change frequently in claims against governments for failure to prevent deforestation. One sweeping submission to the International Criminal Court seeking an investigation of crimes against humanity allegedly committed in the Brazilian Amazon by the Bolsonaro Administration called cattle ranching “the most important driver of Amazonian deforestation.” A report by climate experts appended to the submission discussed the “attribution of greenhouse gas emissions to the Bolsonaro administration” and argued that “the replacement of forest land with cattle ranch-
es... contributes substantially to global carbon dioxide and methane emissions.\textsuperscript{187}

A lawsuit filed by Peruvian youth, arguing that Peru’s insufficient climate action violated the government’s regulatory, constitutional, and international obligations, cited land use change and agriculture as two of the country’s three largest sources of emissions. The lawsuit emphasized the significance of emissions from agriculture-driven deforestation and enteric fermentation.\textsuperscript{188} No judgment has been issued in that lawsuit,\textsuperscript{189} but a 2016 decision by Colombia’s Constitutional Court ruled favorably on similar claims against the Colombian government’s National Development Plans, provisions of which the Court invalidated as insufficiently protective of páramos—high-altitude ecosystems noted for their significant capacity for CO\textsubscript{2} sequestration—threatened by livestock operations, among other industrial activities.\textsuperscript{190}

As a final example, in the Yucatán, Mayan youth have invoked rights to a healthy environment and Indigenous autonomy in a constitutional challenge to the issuance of a permit to a massive industrial pig farm, which the Supreme Court of Justice of Mexico ordered closed in May 2021 pending final resolution of the case.\textsuperscript{191} In an amicus brief filed in the Second District Court in the State of Yucatán in February 2022, a coalition of environmental and public-health NGOs emphasized the causal connection between pig farming’s significant methane and nitrous oxide emissions and the public health and environmental damage inflicted by climate change.\textsuperscript{192} In Febru-


\textsuperscript{188} Constitutional Complaint, Corte Superior de Justicia de Lima, Álvarez v. Peru, Dec. 16, 2019, at 11.

\textsuperscript{189} See Vilchez & Savaresi, supra note 85, at 18.

\textsuperscript{190} Corte Constitucional [C.C.] [Constitutional Court], Febrero 8, 2016, Sentencia C-035/16 (Colom.); cf. S.T.F., Arguição de Descuprimento de Preceito Fundamental 934 No. 0112562-91.2022.1.00.0000, Relator: Min. Nunes Marques, 08.01.2022 (Braz.) (alleging constitutional violations by the Brazilian federal government in failing to fund sufficient monitoring of livestock-linked deforestation in the Cerrado).


\textsuperscript{192} Ref. Presentación de Amicus Curiae en relación con el Juicio de Amparo Caso Homún, Juzgado Segundo de Distrito en el Estado de Yucatán, Número de Expediente 1757/2019, at 16
ary 2024, the Second District Court revoked the permit based on irregularities in the environmental impact assessment process and on the evidence presented about the environmental risks the farm poses, including deforestation, the pollution of a culturally and ecologically significant ring of subterranean pools (the *Anillo de Cenotes*[^193]), and other air and water pollution from manure.[^194]

E. Non-Judicial Challenges

Although lawyers generally view litigation as the quintessential lever of accountability, non-judicial grievance mechanisms may also provide viable pathways to change, including at the international level.[^195] The Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises offer one such avenue.[^196] Any interested party may submit a “specific instance of alleged misconduct” in violation of the Guidelines to the OECD National Contact Point (NCP), which is empowered to conduct preliminary investigations, facilitate dialogue, and make recommendations. Participation in the process is voluntary, and the NCP lacks authority to order or enforce any remedies.[^197]

In late 2021, the Italian Rete Legalità per il Clima (Climate Legality Network) submitted a case detailing alleged misconduct by “multinational companies that manage intensive livestock farms in Italy” in a manner that is incompatible with national and European public policies aimed at addressing climate change.[^198] The network’s filing cit-
ed “systemic violations” of OECD guidelines, including insufficient transparency of information and failure to identify and manage risks associated with the release of methane and other GHGs “in the midst of a climate emergency.”

According to the filing, the Network hoped the NCP process would result in the release of information about the companies’ emissions and any policies or practices adopted to mitigate them—a degree of transparency that might ultimately lead to significant emissions reductions. However, the NCP appears not to have accepted the case, in which participation by the targeted multinationals (which declined to respond to the Network’s direct request for information, sent prior to the filing of the case) would in any case be at their discretion.

Meanwhile, environmental NGOs have submitted repeated requests to the Inter-American Commission on Human Rights (IACHR), a consultative organ of the intergovernmental Organization of American States, for a thematic hearing focused on human rights violations associated with concentrated animal feeding operations (CAFOs) in the Americas. The requests have explicitly argued that...

199. Id. at 3.
200. Id. at 4.
202. See, e.g., Request to the Inter-Am. Comm’n H.R. for a Thematic Hearing on the Human Rights Situation of Individuals and Communities Affected by Concentrated Animal Feeding Operations in the Hemisphere (Oct. 11, 2021), https://www.biologicaldiversity.org/campaigns/industrial_animal_agriculture/pdfs/ENGRegionalCAFOandHR.pdf [https://perma.cc/8T9T-89LY] [hereinafter Request to the IACHR] (focusing on Argentina, Chile, Ecuador, Mexico, and the United States). The IACHR is a quasi-judicial body with discretion to accept or reject requests for “thematic” hearings, which can serve to increase understanding and public awareness of particular human rights abuses in the region. See International Coalition Petitions Inter-American Commission on Human Rights to Investigate Factory-Farm Abuses, EARTHJUSTICE (Oct...
CAFOs contribute to climate change through high methane and nitrous oxide emissions and contended that storms exacerbated by climate change increase the likelihood of CAFO waste pit overflows and breaches, which contaminate surface and groundwater. In March 2023, at an informal hearing before the IACHR, advocates testified to “the massive harms that CAFOs in the United States cause.”

IV. Emergent Climate Challenges to Animal Agriculture in U.S. Courts

The United States is conspicuously absent from the set of standard-bearing cases discussed in the preceding Part. Yet, even in the United States, climate litigants have begun to raise animal agriculture’s climate harms, most frequently—but not exclusively—in litigation against government actors. Some U.S. courts have in turn proved receptive to recognizing the link between animal agriculture and climate change.

A. Federal Agencies

The largest group of relevant U.S. lawsuits includes suits alleging government support for, or regulatory acquiescence to, animal agriculture. This is unsurprising in the United States, where an array of statutory protections exempting animal agriculture firms from direct liability for environmental harm—including so-called “right to farm” laws—may lead litigants instead to challenge agencies’ permitting decisions or rulemakings in an effort to compel affirmative regulatory action. Given their broad rulemaking and adjudicatory enforce-
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U.S. federal government agencies are perennial targets of litigation efforts mounted by animal welfare, environmental, and other NGOs seeking regulation of industrial animal agriculture under statutes including the National Environmental Policy Act (NEPA) and the Administrative Procedure Act (APA), among others. Historically, the threat of climate change has played only a limited role compared to more direct and immediate forms of environmental damage from industrial animal agriculture. However, as the following cases show, a growing number of plaintiffs have cited GHG emissions as an important component of animal agriculture’s overall environmental impact.

One early and prominent example began with a petition for rulemaking filed in 2009 by several NGOs, including the Humane Society of the United States, requesting that EPA regulate CAFOs as a category of emissions sources under the CAA. After more than five years without agency acknowledgement, the petitioners sued EPA in an effort to compel a response, alleging a violation of the APA’s “unreasonable delay” provision. The district court, applying the relatively stringent notice requirements of the CAA instead of those applicable to actions arising under the APA, granted EPA’s motion to dismiss without any comment on the petition’s merits. In 2017, EPA finally responded with a letter denying the petition, ostensibly because the agency lacked the “accurate methodologies for estimating [CAFO] emissions” that would be required to effectively regulate

208. Though the specifics of each statutory scheme vary, NGOs are often able to file “petitions for review”... against agencies for noncompliance with statutory mandates,” i.e., “challenges to substantively or procedurally deficient agency actions... brought under the judicial review provisions of environmental statutes” or the Administrative Procedure Act. David E. Adelman & Robert L. Glicksman, The Limits of Citizen Environmental Litigation, 33 NAT. RES. & ENV’T 17, 17 (2019).


the industry. EPA’s letter left open the possibility that “EPA may initiate a process to determine whether to list CAFOs under CAA section 111(b)(1)(A)” in the future.

Climate change also played a key role in an action brought in 2020 by a coalition of rural, environmental, and animal advocacy organizations against the Council of Environmental Quality (CEQ) aiming to enjoin a rule change that had exempted federal financial assistance to CAFOs from NEPA analysis and review. Along with allegations of other environmental harms, the complaint argued that CAFOs “cause and exacerbate climate change” and pointed to previously submitted public comments that “detailed how the CAFO industry . . . spur[s] climate change.” The plaintiffs redoubled their climate change claims in opposition to the defendants’ motion to dismiss, but ultimately consented to stay the case after an executive order issued by the newly inaugurated Biden Administration prompted CEQ to initiate its own review of the challenged rule.

The use of federal public lands to subsidize animal agriculture has also attracted climate litigants’ attention. In 2018, for example, plaintiffs sought a “phase out” of “fossil fuel extraction, animal agriculture, and commercial logging of old-growth forests on federal

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213. Id. at 2. For further analysis see Katrina Tomas, Manure Management for Climate Change Mitigation: Regulating CAFO Greenhouse Gas Emissions Under the Clean Air Act, 73 U. MIAMI L. REV. 531 (2019).


217. Plaintiffs’ Opposition to Defendants’ Motion to Dismiss at 24 n.15, Iowa Citizens for Cnty. Improvement v. Council on Envt’l Quality, No. 20-CV-2715-TJK (D.D.C. Nov. 12, 2020) (“Indeed, the far-reaching and cumulative effects of any new or expanding CAFO—including its contribution to climate change—demonstrates that . . . it is guaranteed to affect Plaintiffs’ members.”).

lands,” claiming these activities cumulatively threatened an expansive constitutional “right to wilderness.” While “acknowled[ing] the ‘serious’ and ‘well recognized’ harms associated with climate change,” the district court granted the federal defendants’ motion to dismiss based on plaintiffs’ lack of “particularized” injury pursuant to Article III standing, invoking as well the political question doctrine. However, in concluding that the claimed right to wilderness was not “clearly established,” the court stopped short of rejecting a “narrower” “right to a ‘stable climate system.’”

Similar but less sweeping challenges premised on statutory rather than constitutional violations have continued under the Biden Administration. In January 2022, a trio of environmental NGOs filed one such lawsuit objecting to the National Park Service’s (NPS) 2021 decision to extend and expand ranching in Point Reyes National Seashore and Golden Gate National Recreation Area. The dispute began in 2016, when the same plaintiffs sued to force NPS to update its management plans, citing “newer science and data [that] identified methane emissions from dairy wastes (or manure) as the overwhelming source of greenhouse gas emissions at the National Seashore.” The parties settled in 2017, with the plaintiffs acquiescing to interim extensions of existing leases in exchange for NPS updating the applicable management plan and environmental impact statement within four years.

In the renewed suit, in addition to contending that NPS “ignored how ranching will exacerbate” the local consequences of climate change, including “water quality and quantity problems,” the complaint noted that NPS had failed to adopt a “climate action plan that addresses [GHG] emissions from ranching” prior to issuing its decision. To remedy these alleged violations of the APA and various

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220. Id. at 1300.
221. Id. at 1302. The prospect of such a right had previously been raised in the Juliana youth climate litigation. See infra notes 478–481 and accompanying text.
substantive statutes, the plaintiffs seek vacatur and remand of the decision and an injunction precluding expansion of ranching and other commercial operations within the public lands in question.\footnote{226. Id. at 39.}

While that litigation remains pending, an early victory for ranching interests in another suit involving the park’s Tule elk herd\footnote{227. In the suit, brought by animal advocates to remedy the plight of Tule elk living at the National Seashore who had been blocked by cattle fencing from reaching water and were dying in large numbers, the court granted the government defendants’ motion for summary judgment, interpreting the statute not to have imposed a nondiscretionary duty and concluding that the court could not compel the agency to revise its management plans. Gescheidt v. Haaland, 2023 WL 2250268 (N.D. Cal. Feb. 27, 2023).} was effectively undone in June 2023, when NPS officials announced plans to expand the area of the park open to the elk regardless of the outcome of the litigation, “cit[ing] climate change as a primary driver” of the decision to allow the elk access to water.\footnote{228. Kurtis Alexander, Protesters Hate the Elk Fence at This Bay Area National Park. Now It Might Come Down, S.F. CHRONICLE (June 15, 2023), https://www.sfchronicle.com/climate/article/bay-area-national-park-remove-controversial-elk-18152240.php [on file with the Journal].} The next month, a new lawsuit filed in Arizona challenged federal agencies’ authorization of livestock grazing in the Coronado National Forest, which the plaintiffs alleged “exacerbate[s]” the “significant threat that climate change poses” to critical habitats in violation of the Endangered Species Act (ESA).\footnote{229. Complaint for Declaratory and Injunctive Relief at 23, Center for Biological Diversity v. Moore, No. 4:23CV00354 (D. Ariz. July 28, 2023); see also infra notes 500–506 and accompanying text (discussing climate change and the Endangered Species Act).}

A variety of suits implicate other forms of federal support for animal agriculture or challenge federal agencies’ relatively permissive regulation thereof. In 2019, a group of animal welfare and environmental NGOs sought judicial review and vacatur of a “modernized” Slaughter Rule, newly promulgated by the U.S. Department of Agriculture’s (USDA’s) Food Safety and Inspection Service, which revoked the maximum line speed limits that had previously applied to pig slaughter.\footnote{230. Complaint for Vacatur, Declaratory, and Injunctive Relief, Farm Sanctuary v. U.S. Dep’t of Agric., 545 F.Supp.3d 50 (W.D.N.Y. 2019) (6:19-CV-06910).} Alleging violations of the APA, the Humane Methods of Slaughter Act, and the Federal Meat Inspection Act, plaintiffs argued that the “increase in pig demand and slaughter numbers” facilitated by the rule would “likely cause significant adverse environmental effects,” including increased “risks of climate change, largely as a result of the industry’s significant production of methane and
nitrous oxide,” which USDA had failed to appropriately analyze as required by NEPA.\textsuperscript{231} While the federal district court initially denied the USDA’s motion to dismiss and affirmed the plaintiffs’ standing,\textsuperscript{232} the court later granted the government’s motion for summary judgment and dismissed the case on grounds unrelated to climate.\textsuperscript{233}

An incidental climate allegation also featured in a 2020 suit challenging the FDA’s approval of a drug purported to reduce the amount of ammonia gas released from cattle waste.\textsuperscript{234} The plaintiffs—a trio of animal and food-safety advocacy organizations—argued (among other claims for relief) that the FDA had violated NEPA and the APA by failing to consider the potential environmental impacts of its decision, including the exacerbation of GHG emissions likely to result from the drug “enabl[ing] CAFO operators to confine more cows per feedlot concentration.”\textsuperscript{235} The case remains pending after the district court denied the FDA’s motion to dismiss for plaintiffs’ lack of standing.\textsuperscript{236}

More recently, in a 2022 APA challenge subsequently dismissed for lack of standing, a predominantly Black community of farmers\textsuperscript{237} objected to “the federal government’s illegal practice of subsidizing industrial chicken operations through a federal lending program expressly reserved for ‘family farms’ . . . without thoroughly analyzing their environmental impacts,” including “climate impacts from greenhouse gas emissions.”\textsuperscript{238}

\begin{footnotesize}
\begin{itemize}
  \item[231.] Id. at 38, 46.
  \item[232.] The court’s holding on standing was based primarily on the organizations’ “‘core’ animal protection and rescue work” and made no mention of their climate-related claim. Farm Sanctuary v. U.S. Dep’t of Agric., 545 F.Supp.3d 50, 66 (W.D.N.Y. 2021).
  \item[236.] Animal Legal Def. Fund, 2021 WL 4477901, at *4.
  \item[238.] Complaint for Declaratory and Injunctive Relief at 1, 47, Concerned Citizens of West Tenn. v. U.S. Dep’t of Agric., 2024 WL 313647 (W.D. Tenn. Jan. 26, 2024) (No. 1:22-CV-01274). Plaintiffs had alleged that, although the lending program is “intended to help ‘family farms,’” it is giving “seven figure loans” to “construct large industrial chicken operations affiliated with Tyson, [a] multi-billion-dollar, international conglomerate[]” Id. at 3.
\end{itemize}
\end{footnotesize}
Advocates have also sought to influence federal agencies using non-judicial requests for regulatory enforcement or dispute resolution, which can function as precursors or alternatives to litigation.239 These cases often take aim at private firms indirectly, by urging agency action against them. For example, in 2021, Food & Water Watch and other NGOs filed a letter with the Federal Trade Commission (FTC) alleging violations of the FTC Act and seeking an injunction to prevent pork producer Smithfield Foods from “deceiving consumers with false claims of environmentally sustainable production practices.”240

Although the FTC appears not to have responded yet, pressure on the FTC and other agencies to act may increase if "similar claims against meat processors . . . continue to be filed."241 Indeed, soon after Food & Water Watch’s Complaint, another NGO petitioned the FTC "to stop the National Cattlemen’s Beef Association from . . . downplay[ing] the beef industry’s impact on the climate crisis."242 And in 2023, the Environmental Working Group (EWG) petitioned USDA’s Food Safety and Inspection Service to regulate “climate-friendly” claims and prohibit such claims outright for beef products.243 EWG later filed a Freedom of Information Act (FOIA) lawsuit against the agency, seeking unredacted records related to its


240. Complaint for Action to Stop False or Deceptive Advertising Submitted by Food & Water Watch to the FTC Against Smithfield Foods, Inc., (Feb. 4, 2021), [https://www.foodandwaterwatch.org/wp-content/uploads/2021/08/2021.02.03_Smithfield-FTC-complaint-filed.pdf](https://www.foodandwaterwatch.org/wp-content/uploads/2021/08/2021.02.03_Smithfield-FTC-complaint-filed.pdf) [hereinafter Food & Water Watch Complaint]; see also id. at 2 ("Smithfield’s particularly egregious environmental record and adoption of anaerobic manure digesters to produce and sell dirty, polluting biogas is inconsistent with how reasonable consumers understand the company’s [environmental and sustainability] claims.").


243. See Petition from Env’t Working Grp. to U.S. Dep’t of Agric. to Prohibit “Climate-Friendly” Claims on Beef Products (July 11, 2023), [https://static.ewg.org/upload/pdf/EWG_FSIS_Petition_on_Tyson_Climate-Friendly_Beef_Claims.pdf](https://static.ewg.org/upload/pdf/EWG_FSIS_Petition_on_Tyson_Climate-Friendly_Beef_Claims.pdf) [https://perma.cc/9X8F-GTVT] [hereinafter EWG Petition].
“decision to allow Tyson Foods,” a major beef producer, “to market industrially produced beef as ‘climate friendly.’”

Investors, like consumers, can also be misled by environmental misrepresentations; in recent years, the Securities & Exchange Commission (SEC) has shown an increased interest in combating misleading ESG claims, as well as a deeper commitment to its whistleblower award program as an enforcement tool. As discussed below, some advocates have already sought to leverage this tool against SEC-regulated animal agriculture firms.

B. State and Local Government

State agency actions have also been subject to challenge. In North Carolina, for example, a coalition of environmental justice advocates is seeking state administrative review of a recently finalized Department of Environmental Quality (NCDEQ) general permit allowing pig CAFOs to develop biogas projects while continuing to use waste lagoon and sprayfield systems. In an earlier complaint, the coalition had contended that anaerobic digesters—designed to capture methane emissions and convert them into biogas as a purported climate mitigation measure—entrench rather than resolve CAFOs’ harmful effects on the environment and neighboring communities, especially communities of color.

246. See infra note 264 and accompanying text.
State and local agencies may be called to defend their decisions in litigation based on procedural claims analogous to those made under the APA, NEPA, and other federal statutes. In one example, the Washington State Court of Appeals reviewed the state Department of Ecology’s issuance of dairy-industry CAFO waste discharge permits under the Water Pollution Control Act, Washington’s counterpart to the federal Clean Water Act (CWA). Concluding that the agency had failed “to consider the effects of climate change,” the court ordered the permits to be rewritten in light of those impacts. This decision was made possible by the court’s relatively expansive interpretation of the State Environmental Policy Act as imposing on the Department of Ecology a “responsibility to consider the impacts of climate change” in issuing waste discharge permits to animal agriculture operations.

In another example, in 2018 the Minnesota Center for Environmental Advocacy sued the Minnesota Pollution Control Agency (MPCA) for deciding to permit a major expansion of Daley Farms, a large dairy CAFO, without first requiring an environmental impact statement (EIS). The Minnesota Court of Appeals reversed the agency’s approval of the permit. After evaluating the approval under Minnesota’s administrative review and environmental review statutes, the court found that MPCA had failed to consider adequately the project’s GHG emissions and ordered MPCA to do so.

Following a supplemental inquiry that incorporated, as ordered, an assessment of the dairy farm’s climate impacts, the MPCA again decided that the proposed expansion did not require an EIS. Even
so, the expansion continued to face county-level barriers. Then, in 2022, Minnesota revised its environmental review process to require new livestock feedlots, as well as other types of projects, to analyze climate impacts—including expected GHG emissions and potential mitigation measures—during environmental review. In public comments submitted in 2021 urging the state to implement this change (which had been under consideration since at least 2019), climate advocates cited the Court of Appeals’ decision in Daley Farms as evidence of the “risk of litigation” associated with “delaying the incorporation of climate consequences into environmental review.”

Meanwhile, the government of Tulare County, California, home to Sequoia National Park, has also been forced to confront the climate consequences of animal agriculture. Environmentalists sued the county in 2018 alleging that the county’s plans to streamline the approval of dairy openings and expansions violated the California Environmental Quality Act by failing to provide for adequate consideration and mitigation of the facilities’ GHG emissions. The parties negotiated a settlement in 2019 that required the county to strengthen the permitting plan’s climate-related measures and en-
sure rigorous oversight, annual public reporting, and enforcement of dairies’ compliance.260

C. The Private Sector

Relative to some of their foreign counterparts, U.S. climate litigants have delayed bringing challenges to private-sector participants in animal agriculture. However, there are early signs of accelerating interest in mounting such challenges, using both litigation and nonjudicial tools.

Most notably, days before the High Court’s decision in the seminal consumer protection lawsuit against Danish Crown,261 New York State brought a similar suit against JBS, accusing the company of violating the state’s consumer protection statutes with “sweeping representations to consumers about [JBS’s] commitment to reducing its greenhouse gas emissions” that the firm “has had no viable plan to meet” and “could not feasibly meet . . . because there are no proven agricultural practices to reduce its greenhouse gas emissions to net zero at the JBS Group’s current scale, and offsetting those emissions would be a costly undertaking of an unprecedented degree.”262

New York’s lawsuit, which seeks a variety of judicially enforceable remedies, including injunctive relief, civil penalties, and disgorgement, builds on prior nonjudicial advocacy efforts.263 In 2023, the environmental NGO Mighty Earth submitted a whistleblower complaint to the SEC, seeking an investigation into “Sustainability-Linked Bonds” issued by JBS. The complaint alleged that the bonds were misleading because, among other things, the company’s GHG emissions continue to grow.264 A month after the complaint was submit-


261. See supra note 102 and accompanying text.


ted, JBS sought to appeal a parallel finding by the National Advertising Division (NAD) of the nongovernmental Better Business Bureau, which had “determined that JBS’ ‘net zero’ claims reasonably create[d] consumer expectations that the advertiser’s efforts [we]re providing environmental benefits,” and held that JBS’s “preliminary efforts” fell short of its claims. The appellate body rejected JBS’s appeal and recommended that the firm stop making the net-zero claims at issue.

JBS had claimed in part that “the SBTi [Science Based Targets initiative] recognized” its “Net Zero Commitment.” NAD recommended that JBS discontinue that claim because it did not have an SBTi “approved strategy.” After NAD’s decision, a group of NGOs wrote to the SBTi to highlight JBS’s misrepresentations about the process:

JBS . . . has been found to be using SBTi to make misleading green claims. The company continues to appear on SBTi’s company dashboard, even though the period (24 months) for it to get its plan approved had expired. **SBTi should urgently act to remove JBS from the committed list . . .**

In March 2024, SBTi changed JBS’ status on its dashboard to “commitment removed.” Given the apparent potency of this layered, multistakeholder approach to contesting JBS’s climate representations, future climate advocates may deploy similar strategies of confluence, drawing on the full variety of advocacy channels available rather than resorting to courts in isolation.


268. JBS NAD Appeal, supra note 265.


Early developments in climate change and animal agriculture litigation and nonjudicial advocacy are promising. Many of these efforts have unfolded in non-U.S. jurisdictions but are adaptable to the U.S. legal context. Moreover, a growing body of U.S. cases is challenging animal agriculture’s climate impacts in lawsuits directed at government policies and decisions, sometimes successfully. The following Part explores which legal theories may be available to litigants looking to bring even more ambitious animal agriculture climate lawsuits in U.S. courts.

V. Future Directions in U.S. Courts

In the United States, efforts to address the climate impacts of animal agriculture continue to be muted, even as compared to the still-inadequate actions taken in regard to other major sources of emissions. Just as the climate impacts of animal agriculture have not been sufficiently addressed by regulators and are not well understood by the public,271 climate litigation also has yet to focus on the industry in earnest. Yet, for climate advocates, U.S. litigation may be especially appealing because of the failure of U.S. regulators to address the animal agriculture industry’s emissions and because of the scale of the industry272: the United States exports a surplus of meat and dairy in addition to having exceptionally high domestic per capita consumption.273

This Part explores the legal claims that could fill this void, which include consumer protection, tort, financial theories, public trust and other claims directed at government, and cross-border approaches. Table 3 below provides a simplified overview of these possibilities. Also described throughout the following Sections are potential nonjudicial challenges, such as administrative complaints, which may complement or fill gaps left by litigation.

In surveying many different types of claims, this Part seeks only to identify, not to develop in full, various threads that others may attempt to implement in practice in the future. Nor is this Part intended to hierarchize these possibilities or to discuss comprehensively the merits, pitfalls, or practical considerations that bringing any of

271. See discussion supra Part II.
272. Id.
273. EMISSIONS IMPOSSIBLE MEAT AND DAIRY, supra note 24, at 6.
these claims might entail. Those inquiries are entrusted to future scholars and practitioners.

Table 3: Overview of Potential U.S. Climate Change and Animal Agriculture Litigation

| Category                     | Doctrinal Bases                        | Example Claims                                                   | Representative Case*
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<tbody>
<tr>
<td>Consumer Protection</td>
<td>Common law; state and federal statutes</td>
<td>Fraud; failure to warn; unfair trade practices; &quot;climate-washing&quot;</td>
<td>California v. Exxon Mobil Corp.</td>
</tr>
<tr>
<td>Tort</td>
<td>Common law</td>
<td>Nuisance; negligence; trespass</td>
<td>California v. Exxon Mobil Corp.</td>
</tr>
<tr>
<td>Financial Claims</td>
<td>Common law; state and federal statutes</td>
<td>Derivative lawsuits; securities litigation</td>
<td>Ramirez v. Exxon Mobil Corp.</td>
</tr>
<tr>
<td>Claims Against Governments</td>
<td>Common law; state and federal statutes; state constitutions</td>
<td>Public trust; right to a healthy environment; APA; NEPA</td>
<td>Held v. State of Montana</td>
</tr>
<tr>
<td>Other Statutory Claims</td>
<td>State and federal statutes</td>
<td>Violations of environmental statutes (e.g., ESA, CWA); FOIA litigation; RICO</td>
<td>Puerto Rico v. Exxon Mobil Corp.</td>
</tr>
<tr>
<td>Cross-Border Theories</td>
<td>Foreign law; state and federal statutes</td>
<td>Claims based on multinational activities, foreign ownership, or heightened regulation in other jurisdictions; claims before multilateral institutions</td>
<td>Comissão Pastoral da Terra v. BNP Paribas</td>
</tr>
</tbody>
</table>

* Each of the cases listed in Table 3 is discussed as an example in this Part.

A. Consumer Protection

Consumer-centered litigation focused on an industry’s deception can offer opportunities to publicly demonstrate realities previously and perhaps deliberately obscured from the broader consuming public and policymakers, as exemplified by litigation and debate surrounding the tobacco industry in the 1990s.274 Possible common-law claims in these contexts include fraud or misrepresentation and

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unjust enrichment. State consumer protection statutes often prohibit false advertising and deceptive trade practices, and federal statutes may offer avenues for litigation in limited circumstances. This Section considers consumer protection actions that might take aim at the misleading public statements and marketing campaigns that buttress meat and dairy sales and help shield companies’ emissions from public scrutiny.

Consumer protection claims are increasingly important given growing interest in sustainable consumption. A 2021 U.S. consumer poll showed that more than 60% of people surveyed were willing to pay more for products they perceived to be sustainable, rising to 70% among ages 18–40. Significantly, around 37% of consumers also state that concerns about climate change impact their food purchases, and many look to terms like “natural,” “green,” and “locally produced” to determine the climate impacts of their food. Many companies, including purveyors of meat and dairy, respond to these concerns by marketing their products as in some way climate-friendly, but these claims are rarely quantified for consumers’ benefit or subject to third-party verification. The change that consumers seek will remain elusive if companies are free to misrepresent their climate impacts.

275. Fraud generally requires a defendant to have made a fraudulent or material misrepresentation of fact that induced consumers’ justified reliance. *Restatement (Second) of Contracts* § 164(1) (Am. L. Inst. 1981). In alleging common law unjust enrichment, a plaintiff must assert that the offending party has obtained an economic benefit that would be unjust for the beneficiary to retain. *Restatement (Third) of Restitution & Unjust Enrichment* § 1 (Am. L. Inst. 2011).

276. Though precise statutory requirements vary, a plaintiff generally must assert that the offending party (1) made false or misleading statements resulting in (2) actual and material deception and (3) actual or likely injury to the plaintiff. *E.g.*, Minn. Stat. § 325.69, subdiv. 1; Conn. Gen. Stat § 735-42; Del. Code tit. 6, § 2513. A deception is material when it is likely to influence purchasing decisions by reasonable consumers. Those consumers need not always bring the claim; many statutes invite a class, market competitors, or government enforcement authorities to file suit on consumers’ behalf. See Elizabeth O’Connor Tomlinson, *79 Causes of Action* 2d 323 (2017). Because there is substantial overlap between the elements of these common law fraud and statutory claims, they are frequently asserted together.


As discussed below, animal welfare advocates have successfully utilized consumer protection claims against animal agriculture producers with respect to their claimed “humane” treatment of animals for more than a decade. Environmental advocates have done the same against food producers and other companies, from SeaWorld to Windex, for “greenwashing,” or falsely marketing their products as environmentally friendly.

Most recently, both prosecutors and civil plaintiffs have deployed consumer protection strategies against fossil fuel producers, alleging “climate-washing” in violation of state deceptive trade practice statutes. The cases brought against Danish Crown and Arla Foods in Denmark and Sweden, as well as the NAD decision against JBS, suggest that similar climate-washing claims could prevail against animal agriculture producers.

1. Animal Welfare

In the absence of regulatory oversight, advocates have utilized litigation to challenge animal agriculture producers’ treatment of animals. These suits target misleading labels, false certifications of compliance, and failures to disclose facts about production processes, all of which misrepresent to consumers the actual animal welfare standards associated with a given product. The complaints allege violations of state consumer protection law for false advertising or deceptive trade practices, frequently alongside violations of common


282. Silverman-Roati, supra note 7; TigRE & BARRY, supra note 162, at 6 (noting “an uptick in 2023 in the number of climate change-focused greenwashing cases” in the United States).

283. See supra Section III(A).

284. See supra notes 265–268 and accompanying text.

law fraudulent misrepresentation. 286 Many of these cases have produced monetary awards, declaratory relief, and other favorable resolutions. Though still described as “frivolous” by some of their targets, such lawsuits have influenced companies as well known as Ben & Jerry’s and Butterball to withdraw misleading claims about their “humane” treatment of animals. 287

In addition to animal advocates, market competitors 288 and even the U.S. government have filed or intervened in these suits, including at the federal level. While individual consumers are typically denied standing under the Lanham Act—the federal statute that governs trade-and service-marks and unfair competition—market competitors are authorized to bring suit to prevent false product claims. 289 The False Claims Act functions similarly with respect to contracts to which the federal government is a party. For example, in United States ex rel. Humane Society v. Westland/Hallmark Meat Co., the Humane Society of the United States sued Hallmark Meat in relation to a contract for sale of beef to the national school lunch program, alleging fraud and false certification under the False Claims Act and common law fraud and negligent misrepresentation for violations of contract provisions on the treatment of animals. 290 After the United States intervened, the suit settled, ending with a $155 million consent judgment against Hallmark Meat. 291 The increasing incorporation of climate-related provisions in contracts creates potential for contractual claims relating to climate harms. 292

287. See Jacobs, supra note 285.
2. The Rise of Greenwashing Litigation

While companies were accused of misrepresenting their environmental commitments as early as the 1990s, significant consumer litigation about corporate greenwashing began in the early 2010s. The majority of these claims have been brought either by private individuals, as class actions, or as regulatory complaints. Like the animal welfare suits, many have resulted in the removal of misleading claims.

In one prominent example, more than 100 class actions were filed against Audi and Volkswagen in the wake of 2015’s “Dieselgate” scandal, alleging that the carmakers had made false representations about emissions, used “defeat devices” to evade federal and state pollution standards, and misleadingly marketed certain vehicles as “clean,” selling them at substantially higher prices. The companies eventually recalled millions of vehicles worldwide and offered U.S. class members full cash refunds. Separate actions brought by state attorneys general were also settled for substantial monetary and injunctive relief.

Other claims challenged through litigation range from Keurig’s statements that its coffee pods are recyclable—despite there being few facilities in the United States that would recycle them—to Kirkland’s marketing of cleaning products that contained known tox-
ins as “environmentally responsible.” In addition to targeted companies changing or removing individual false or misleading claims, proactively avoiding greenwashing is now a recognized element of corporate governance and risk management.

3. Fossil Fuel Climate-Washing Litigation

Most recently, "climate-washing" litigation has been brought against fossil-fuel producers for advertising strategies that allegedly misrepresent their products or practices as climate-friendly. The U.S. "Carbon Majors" suits discussed above allege three major types of misrepresentation: (1) denial of climate change harms, (2) omission of knowledge about the harms of fossil fuel use, and (3) the greenwashing of defendants' own activities.

For example, California's 2023 suit against Exxon, Shell, Chevron, and others invokes three state-law causes of action relating to the defendants' allegedly untrue or misleading advertising, misleading environmental marketing, and other unlawful, unfair, or fraudulent business practices. California seeks injunctions, compensatory damages, and civil penalties, asserting that the defendants sought to induce increased fossil-fuel consumption using deceptive marketing practices and "[a]ffirmatively promot[ed] the use of fossil fuels while knowing that fossil fuels would lead to devastating consequences on the climate.” As part of this decades-long "disinformation cam-

302. See Rashmi Dubé, Mitigating the Risk of Greenwashing Claims, 70 RISK MGMT. 8, 8–9 (2023). Commentators have warned companies over the last decade that a "flood" of litigation regarding green advertising could be on the horizon, and that companies must balance truth in marketing with taking advantage of the eco-conscious consumer market. See Joseph W. Price et al., Even Courts Are Going Green: How to Protect Yourself from Greenwashing Litigation, 48 ARK. L. 22 (Winter 2013); see also Tanya C. Nesbitt, Rise in Greenwashing Cases: What Companies Need to Know, THOMPSON HINE (Nov. 17, 2022), https://www.thompsonhine.com/insights/risin-greenwashing-cases-what-companies-need-to-know [https://perma.cc/G4EK-YR9P].
303. See Lisa Benjamin et al., Climate-Washing Litigation: Legal Liability for Misleading Climate Communications, CLIMATESOC.SCI.NETWORK 4 (2022).
304. SETZER & HIGHAM, supra note 70, at 39–42 ("Cases concerned with mis- and disinformation on climate change are far from new, but the last few years have seen an explosion of ‘climate-washing’ cases filed before both courts and administrative bodies such as consumer protection agencies.").
305. Supra notes 6–8 and accompanying text.
307. Id. at 126, 132–34.
campaign,” California claims the defendants “falsely and misleadingly portray [fossil fuel] products as ‘green’” and “portray themselves as climate-friendly energy companies” despite “continu[ing] to primarily invest in, develop, promote, and profit from fossil fuel products,” thereby “exploit[ing] California consumers’ concerns about climate change and their desire to purchase ‘green’ products”—textbook “greenwashing,” as California’s complaint describes it. 

4. Toward Animal Agriculture Climate-Washing Litigation

There are several similarities that make it possible to draw from the fossil fuel cases in considering potential claims against animal agriculture producers. First, like the Carbon Majors, animal agriculture companies have known for decades—dating at least to the FAO’s 2006 report, Livestock’s Long Shadow— that animal agriculture is a major driver of climate change. Thus, as in the fossil fuel context, animal agriculture companies’ and industry groups’ pronouncements about their climate impacts can be tested against a growing body of reliable public information.

Moreover, animal agriculture producers and fossil fuel producers have utilized some similar advertising strategies. For example, the Brazilian meat producer JBS—the largest emitter of GHGs among meat and dairy producers—has stated it is working to “lower” its per-animal emissions. Yet at the same time, JBS projects growth in the number of animals it will produce (around 30% by 2030)—which will result in a rise in total emissions far outpacing these per-animal reductions. This initiative parallels a challenged campaign by BP advertising that it is producing “clean” petroleum products that will emit less CO₂ than its competitors’ products. At the time of that campaign, BP was simultaneously projecting that its fossil fuel sales would continue to grow by 1.6% annually up to 2035.

308. Id. at 79–80.
309. LIVESTOCK’S LONG SHADOW, supra note 26.
311. EMISSIONS IMPOSSIBLE MEAT AND DAIRY, supra note 24, at 3, 11.
Fossil fuel corporations also frequently advertise their investments in other forms of energy (e.g., renewables) and “cutting edge” technologies as evidence of their climate commitments. For instance, BP projects that renewable energy sources will make up more than 50% of its portfolio by 2050, and Exxon regularly features its “algae biofuel” production. However, as the Carbon Majors complaints point out, the relatively minute levels of actual investment allocated to these initiatives (less than one percent of annual revenue in Exxon’s case, and about 2.3 percent for BP) undercut these sustainability claims. Animal agriculture firms have made headlines with similar pronouncements about their use of technological fixes like feed additives and biogas digesters—the benefits and feasibility of which are disputed—as well as their investments in plant-based alternatives. It is currently difficult to determine whether these investments make up a significant portion of the companies’ overall spending, as most companies do not provide comprehensive financial reporting about them.

319. BLINDSPOT, supra note 60, at 38. In fact, some meat and dairy executives have stated that plant-based products are “an addition to, not a subtraction from” meat production models.
As more information has emerged about the climate impacts of animal agriculture—including its outsized role in emitting the climate super-pollutant methane—animal agriculture companies and trade groups have engaged in communications strategies and advertisements that may expose them to consumer protection claims. For example, many animal agriculture companies do not publicly report their GHG emissions; even those that do may underreport their emissions (for example, by excluding “Scope 3” emissions produced by the animals themselves and feed production). Paired with public-facing positive statements about an animal product’s climate impacts, such under-reporting or non-reporting could expose these firms to legal risk. Moreover, animal agriculture companies—like other heavy emitters—have relied on carbon offsets to address their climate impacts. Litigation is starting to challenge such reliance, especially when used to support positive climate pronouncements. The recent lawsuit filed by the New York Attorney General against JBS explicitly alleges that, if JBS were to try to rely on carbon offset credits to underpin its net zero pledge, “it is unclear whether sufficient credits would be available or could feasibly be afforded by the JBS Group given the volume of [its] reported emissions and forecasted growth plans.”

Some animal agriculture companies are also engaging in carbon “insetting,” or claiming to reduce GHG emissions within their own supply chains, for example by incorporating “regenerative” practices. Where poorly supported, such claims may also be chal-


323. Complaint at 32, People v. JBS USA Food Co., No. 450682/2024 (N.Y. Sup. Ct. Feb. 28, 2024). For further discussion, see supra notes 262–263 and accompanying text.


lenged. As the animal welfare suits demonstrate, lawsuits against animal agriculture companies are no longer just for interested advocates; successful cases may also benefit industry competitors and governments, with significant monetary awards that could attract private law firms’ attention.327

Cases of coordinated deception may also implicate consulting, advertising, or public relations firms.328 Fossil fuel producers have worked with the top five U.S. advertising agencies for decades, and their advertising is under increased scrutiny.329 Depending on the underlying facts, similar claims may exist against advertising and public relations firms linked to animal agriculture companies.

Non-judicial petitions—for example to federal agencies such as the SEC and FTC330—could urge agencies or state attorneys general to
undertake their own investigations and enforcement actions (as New York has\textsuperscript{331}) or to engage in rulemaking.\textsuperscript{332} Some private standard-setting bodies operate their own complaint mechanisms, like the Better Business Bureau’s NAD (already successfully leveraged against JBS, as discussed above\textsuperscript{333}), which may also shape industry behavior.\textsuperscript{334} In a recent example, complaints to the U.K.’s self-regulatory Advertising Standards Authority\textsuperscript{335} argue that ads supported with government funding breach advertising codes by promoting beef, lamb, and dairy consumption using natural imagery while omitting information about negative environmental impacts, including on the climate.\textsuperscript{336}

\textbf{***}

As awareness about the role of animal agriculture in climate change grows, more information about the climate impacts,
knowledge, representations, and denials of major animal agriculture companies becomes available, and individuals continue to become more conscious about their consumption, consumer protection litigation may emerge as an important strategy. Future developments in the Carbon Majors cases will help clarify the relevant judicial landscape. Already, though, early indications suggest that consumer protection lawsuits may help hold companies in the animal agriculture supply chain responsible for statements about climate change. That in turn could incentivize animal agriculture firms to reduce their emissions or, at the very least, to forgo misleading eco-advertising strategies, allowing consumers to make more informed choices. However, consumer protection litigation is not well-suited to holding animal agriculture producers liable directly for their underlying climate contributions. Plaintiffs interested in obtaining such an outcome may turn instead to the common law of torts.

B. Tort

Climate tort litigation may implicate one or both of two broad categories of conduct: (1) contributions to climate change and its impacts; and (2) failure to adapt operations to mitigate climate change risks. Although U.S. litigation in this area has so far focused primarily on the Carbon Majors, animal agriculture could also be pursued in tort for its own contributions to climate change. And many animal agriculture operations also risk exposure to claims in the second category, especially as the urgency of adaptation to protect neighboring communities increases.

Some scholars have expressed skepticism of tort litigation as a standalone climate mitigation strategy. Others have argued that tort law can and should be adapted to help address climate change, following examples of doctrinal innovation in prior contexts, such as toxic torts, in which courts were likewise presented with vast numbers of defendants, each accused of causing additive, difficult-to-


338. See Hribar, supra note 67, at 7–8 (detailing climate-related risks that exacerbate CAFO-associated harms, including heavy storms, floods, and heat).

339. See, e.g., Douglas A. Kysar, What Climate Change Can Do About Tort Law, 41 ENV'T. L. 1, 4 (2011) (“[T]ort law is unlikely to play a substantial role in the ultimate effort to reduce greenhouse gas emissions.”).
measure harm over decades of operation. With the Carbon Majors cases yet to reach decisions on the merits, how courts might treat climate tort claims remains largely unknown. New Zealand’s trial-bound Fonterra case could offer valuable insight into how common law courts might grapple with innovative climate tort claims, including against animal agriculture. For now, particularly in the United States, animal agriculture companies are untested—but, compared to fossil fuel companies, possibly even more vulnerable—climate tort defendants.

1. Climate Tort Liability Theories

A review of climate tort litigation against fossil fuel producers reveals several causes of action that, by analogy, may be the basis of future claims against animal agriculture, including nuisance (public and private), negligence, and trespass.

340. See Saad, supra note 73, at 903–07. Saad notes a doctrinal innovation made by some courts in toxic tort cases that has particular relevance to the “limitless defendants” problem raised by the New Zealand Court of Appeal in Fonterra: “a substantial factor test which recognizes liability for contributions to harm that exceed negligible or theoretical levels.” Compare Caroline E. Foster, Novel Climate Tort? The New Zealand Court of Appeal Decision in Smith v Fonterra Co-operative Group Limited and Others, 24 ENV’T L. REV. 224, 226 (2022) (summarizing the Fonterra court’s concerns regarding “the potentially limitless classes of potential defendants” in climate tort suits) with Saad, supra note 73, at 906 n.225 (noting that a substantial factor test could “could distinguish a consumer’s negligible contribution to the harm from a fossil fuel producer’s substantial contribution”).

341. See supra notes 6–8 and accompanying text.

342. See supra Section II(B).

343. Jonathan Lovvorn, Climate Change Beyond Environmentalism Part II: Near-Term Climate Mitigation in a Post Regulatory Era, 30 GEO. ENV’T L. REV. 203, 250–52 (2018) (noting “it is now widely accepted that trying to apply tort theory to climate change is not likely to be a fruitful avenue of development,” with a possible exception for “factory farms” and relative optimism vis-à-vis litigation “at the state level”); Daniel E. Walters, Animal Agriculture Liability for Climatic Nuisance: A Path Forward for Climate Change Litigation, 44 COLUM. J. ENV’T. L. 299 (2019).

344. Claims of products liability (i.e., common law tort liability “for harm to persons or property” caused by a manufacturing defect, design defect, or failure to warn, see RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 1–2 (AM. L. INST. 1998)), have also been asserted against fossil fuel producers in relation to the climate harms of their products. As the climate-related harms of animal agriculture become even better understood, and alternative proteins and emissions-mitigating technologies proliferate, analogous claims relating to animal products could conceivably be asserted.
Within the common law tradition, nuisance has long played an important role in remediating environmental problems. Unlike other torts, such as negligence—for which liability is determined in reference to the defendant’s conduct—nuisance depends in part on “the interest invaded.” Private nuisance suits have been used to address local environmental problems unresolved by regulation or statute; public nuisance claims have played a major role in imposing liability for widespread environmental harm, including interstate pollution. Thus, public nuisance is widely understood as the cause of action most suitable to litigation urging climate change mitigation, with private nuisance playing a more prominent role in suits regarding failures to adapt.

Public nuisance encompasses “significant interference” with public health or safety, as well as conduct that knowingly produces a “long-lasting . . . significant effect upon the public right.” Whether conduct can be considered “knowing” is a question of its foreseeability “to a reasonable person.” To demonstrate reasonable foreseeability, suits against fossil fuel companies have referenced not only the scientific consensus on anthropogenic climate change but also evidence that specific defendants “knew or should have known of the dangers associated with the extraction, promotion, and sale of their fossil fuel products.” Similar claims may be levied against animal agriculture actors who have long known of their climate contributions.

345. See Roger Meiners & Bruce Yandle, Common Law and the Conceit of Modern Environmental Policy, 7 GEO. MASON L. REV. 923, 926–946 (1999); Andrew Jackson Heimert, Keeping Pigs Out of Parlors: Using Nuisance Law to Affect the Location of Pollution, 27 ENV’T L. 403, 406–08 & n.7 (1997).


347. Walters, supra note 343, at 301.


350. KAHL & WELLER, supra note 349, at 251.


352. LIVESTOCK’S LONG SHADOW, supra note 26.
Private nuisance, meanwhile, entails intentional or negligent harm to the use and enjoyment of land.\textsuperscript{353} Bringing a private nuisance claim in the climate change context, whether against a fossil fuel producer or a meat producer, raises additional difficulties associated with tracing the private harm at issue back to a particular defendant’s emissions. Plaintiffs must be able to show causation, likely by linking their particular injury—which, even in a \textit{public} nuisance suit, must be individually “distinguishable”—not only to climate change generally but to defendants’ particular contributions to climate change.\textsuperscript{354}

Private nuisance tort litigation against animal agriculture has succeeded in the past, though not yet on climate-related grounds.\textsuperscript{355} The well-known \textit{Murphy Brown} judgment, in addition to its bracing acknowledgement of the harms attributable to intensive animal agriculture,\textsuperscript{356} highlights several issues relevant to possible climate tort litigation against similar defendants. In particular, the court dismissed Murphy-Brown’s argument that its operations, being legal and appropriately permitted, could not be considered nuisances per se, holding that “lawful enterprises can constitute a nuisance in fact.”\textsuperscript{357} The court also noted that Murphy-Brown had known in the years “predating the lawsuit . . . of scientific studies and state government documents” detailing some of the harmful effects of industrial hog operations.\textsuperscript{358}

A climate theory of private nuisance might achieve similar success with a localized claim concerning the failure of animal agricultural facilities “to adapt their operations to reasonably foreseeable harms induced or driven by climate change.”\textsuperscript{359} These include increased risks of extreme weather and flooding, which could result in the release of pollutants from agricultural facilities into neighboring communities’ air and water.\textsuperscript{360} The Conservation Law Foundation (CLF) has brought a number of suits against fossil fuel companies for their

\begin{itemize}
\item \textsuperscript{353} \textit{Restatement (Second) of Torts} § 822 (AM. L. INST. 1979).
\item \textsuperscript{354} Kahl & Weller, \textit{supra} note 349, at 251.
\item \textsuperscript{355} McKiver v. Murphy-Brown, LLC, 980 F.3d 937 (4th Cir. 2020).
\item \textsuperscript{356} See, e.g., Murphy-Brown, 980 F.3d at 978 (Wilkinson, J., concurring) (“What was neglected is that animal welfare and human welfare, far from advancing at cross-purposes, are actually integrally connected. The decades-long transition to [CAFOs] lays bare this connection, and the consequences of its breach, with startling clarity.”).
\item \textsuperscript{357} Id. at 967.
\item \textsuperscript{358} Id. at 947–48.
\item \textsuperscript{359} McGarity \textit{et al.}, \textit{supra} note 337, at 11.
\item \textsuperscript{360} Id. at 11.
\end{itemize}
failures to adapt petroleum storage terminals to the threat of sea-level rise. Although those suits arise under the citizen enforcement provisions of the Resource Conservation Recovery Act and the CWA, CLF has suggested that the “failure to act reasonably in the face of ascertainable climate risk” could also give rise to common law tort liability. That risk is no less ascertainable to the animal agriculture industry. One could imagine such a claim against, for example, the owner of a large-scale hog operation that has failed to adapt its facility to protect neighboring property owners from harms that could be caused by climate-induced flooding.

b. Negligence

Failures to adapt could also form the foundation of negligence claims against the fossil fuel and animal agriculture industries, as could other misconduct. Successful negligence claims require four key elements: duty, breach, causation, and injury. A breach of duty sounding in negligence occurs when one fails to “exercise reasonable care” despite the “foreseeable likelihood that [one’s] conduct will result in harm, the foreseeable severity of any harm that may ensue, and the burden of precautions to eliminate or reduce the risk of harm.”

Plaintiffs have pointed to fossil fuel producers’ failures to adopt “available technologies, energy sources, and business practices that would have mitigated their greenhouse gas pollution” as breaches of this “duty of due care.” That GHG emissions are presently a legal, industry-wide phenomenon does not preclude their characterization


363. For further discussion of the Conservation Law Foundation suits, the Clean Water Act, and the Resource Conservation and Recovery Act, see infra note 498 and accompanying text.

364. RESTATEMENT (THIRD) OF TORTS: PHYS. & EMOTIONAL HARM § 3 (AM. L. INST. 2010).

as negligent, since neither regulatory authorization nor industry custom is an absolute defense to liability.\footnote{See Susan Rose-Ackerman, Regulation and the Law of Torts, 81 AM. ECON. REV. 54, 55 (1991) ("[C]ompliance with [a regulatory] standard is merely evidence for the jury to consider in determining reasonable conduct."); T.J. Hooper v. Northern Barge Co., 60 F.2d 737, 740 (2d Cir. 1932) ("Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.").}

Allegations of a “negligent failure to warn” also appear in these suits in an effort to hold fossil fuel producers liable not only for harms caused by their products, but for their failure to inform consumers of those harms. That failure begins to appear negligent when cast in the light of “the grave dangers presented by the climate effects . . . of fossil fuel products,” of which, it is claimed, any “reasonable” producer would have warned consumers.\footnote{Complaint at 89, Pac. Coast Fed’n of Fishermen’s Ass’ns, Inc. v. Chevron Corp., No. CGC-18-571285 (Cal. Sup. Ct. Nov. 14, 2018).} These claims are most likely to prevail when supported by evidence that “the defendant actually knows of the relevant danger.”\footnote{RESTATEMENT (THIRD) OF TORTS: PHYS. & EMOTIONAL HARM § 18 (AM. L. INST. 2010).}

As noted above, the animal agriculture sector appears to have long had such knowledge of the harmful impact of its products on the climate.\footnote{See supra notes 309–310 and accompanying text.} If a trier of fact is convinced that the fossil fuel industry acted negligently in continuing to market fossil fuel products, one might similarly accept analogous claims made against animal agriculture.

c. Trespass

This discussion of private-law possibilities cannot overlook trespass. Where sea level rise or other geographic changes induced by climate change harm a plaintiff’s land, a trespass claim may be tenable against those responsible for the “intrusion.” Trespass liability does not require defendants to have entered the land themselves; “causing” invasion or “entry of a thing” is sufficient.\footnote{RESTATEMENT (FIRST) OF TORTS § 158 (AM. L. INST. 1934).} For example, Rhode Island has alleged that various fossil fuel producers “caused flood waters, extreme precipitation, landslides, saltwater, and other materials to enter [Rhode Island’s] property, by extracting . . . and[] selling fossil fuel products” despite “knowing those prod-
ucts . . . would cause global and local sea levels to rise . . . .”

New York City’s Carbon Majors suit includes a similar trespass claim. Plaintiffs might prefer to bring preemptive claims under other causes of action based on failures of adaptation and prevention, rather than waiting until climate-induced intrusions have actually occurred before filing suit under a trespass theory. Moreover, like private nuisance, trespass is only available as a cause of action to landowners. Still, trespass claims appear well-suited to certain climate-related harms caused by animal agriculture facilities, such as storm-driven manure overflow. Trespass is less likely than other causes of action, including nuisance, to be addressed by states’ “right to farm” laws, which may otherwise be an obstacle to some climate change and agriculture tort claims in the United States.

2.

Potential Obstacles to Climate Tort Claims: Displacement, Preemption, and Right-to-Farm Laws

There are several potential federal and state law barriers to the success of climate tort claims. Notably, claims centered on animal agriculture differ from fossil-fuel claims in key respects in relation to these obstacles.

a. Federal Common Law Claims

The Supreme Court has interpreted federal environmental statutes—the CAA in particular—to displace certain fossil fuel-related climate tort claims that might otherwise be available under federal common law. In American Electric Power, the Court held that federal common law public nuisance claims against the electricity and transportation sectors were displaced because the CAA “speak[s] di-

373. RESTATEMENT (FIRST) OF TORTS § 158(a) (AM. L. INST. 1934).
374. See, e.g., Aerie Point Holdings LLC v. Vorsteveled Farm LLC, No. 22-AP-279, 2023 WL 2867097, at *1 (Vt. Apr. 7, 2023) (affirming trial court order following merits decision that “plaintiff proved its claims of trespass against defendant,” operator of a major dairy farm, “based on the disposal of wastewater from a tile drain system onto plaintiff’s land”).
375. See discussion infra notes 390–398 and accompanying text.
rectly” to the issue of GHG emissions in delegating authority thereover to EPA.376

The Court has not addressed, however, whether federal common law claims are displaced with respect to animal agriculture emissions, sources of which vary meaningfully across supply chains, from enteric methane released by grazing animals to manure methane associated with stationary CAFO lagoons. It is not clear that the CAA or any other “statutory framework . . . speaks directly” to any of these emissions.377 Nor does the CAA subject animal agriculture emissions (unlike motor vehicle emissions) to its exclusive regulatory jurisdiction.378 Indeed, animal agriculture and the GHG emissions it produces presently escape most CAA regulations, including because EPA has not designated such operations as a “major source” of pollution.379 That said, the broad text of some CAA provisions, including the New Source Performance Standards of Section 111, could be read to grant EPA the authority to regulate at least some animal agriculture emissions, such as those produced by domestic CAFOs.380 EPA itself has previously declined to determine whether or not Section 111 renders CAFO emissions regulable.381

Whether the agency has actually exercised its power is formally immaterial to the Court’s displacement analysis, but Congress must in fact have made the statutory delegation.382 Recent developments in administrative law jurisprudence tending to favor narrower in-

377. Walters, supra note 343, at 300 (contending that “courts should be able to maneuver around the displacement barriers to hear a properly pled federal common law of nuisance action against offending meat producers”).
interpretations of statutes delegating regulatory power may lend support to the notion that Congress has not in fact "spoken directly" to animal agriculture emissions and thus that federal common law is not displaced with respect to the same.383

b. State Common Law Claims

State common law claims risk not displacement, but preemption. Under this doctrine, federal law preempts state laws covering the same subject matter.384 While the Supreme Court has not addressed whether the CAA preempts state common law tort claims related to climate change,385 the Third and Sixth Circuits have both held that the CAA does not preempt state nuisance, negligence, and trespass claims against emitters.386

In City of New York v. Chevron, however, the Second Circuit held that climate tort claims relating to interstate emissions could not proceed under state law. The court held that "a nuisance suit seeking to recover damages for the harms caused by global greenhouse gas emissions” was too “sprawling” to proceed under state common law, concluding that “federal common law preempts state law” and reaffirming that “the Clean Air Act displaces federal common law claims concerned with domestic greenhouse gas emissions.”387 A Delaware Superior Court judge recently held similarly in that state’s Carbon Majors suit while allowing state-law claims concerning air


386. Bell v. Cheswick Generating Station, 734 F.3d 188, 190, 192 (3d Cir. 2013); Merrick v. Diageo Americas Supply, Inc., 805 F.3d 685, 691 (6th Cir. 2015) (“State common law standards are thus ‘requirements’ adopted by ‘States,’ such that the Clean Air Act states’ rights savings clause preserves them against preemption.”); see also Freeman v. Grain Processing Corp, 848 N.W.2d 58, 63 (Iowa 2014) (reaching the same conclusion).

pollution within the state to proceed.388 Still, even if the logic of such rulings were adopted more widely, preemption—like displacement at the federal level—may not preclude emissions-related claims against animal agriculture to the extent such emissions are not covered by EPA’s congressionally delegated regulatory authority.389

State climate tort claims against animal agriculture do, however, face industry-specific statutory barriers. All fifty states have adopted “right to farm” laws that shield agriculture (to varying degrees) from lawsuits grounded in state tort law. Most commonly, such laws codify the common law “coming to the nuisance” defense, which protects preexisting agriculture operations from nuisance claims.390 For example, Illinois’ right to farm law protects farms from liability for any “private or public nuisance” attributable to “changed conditions in the surrounding area,” unless the nuisance results from the farm’s negligence or improper operation.391 Right to farm laws are more relevant to claims tied closely to particular agricultural operations, as opposed to supporting activities such as marketing, promotion, and distribution.

The prospects for state law climate tort claims against animal agriculture will depend on how narrowly the laws’ various exceptions are construed—a question of statutory interpretation subject to intense debate with respect to similar immunity-granting statutes.392 For example, many states’ right to farm laws explicitly limit their protections to agricultural operations that comply with applicable regulations, including environmental and public health laws, and adhere to “generally accepted” or “reasonable” practices.393 Given the ubiquity of animal agriculture operations producing substantial GHG emissions, such standards-of-conduct provisions may not exclude these operations from the protection conferred by right to farm

388. State ex rel. Jennings v. BP Am. Inc., No. N20C-09-097, 2024 WL 98888, at *24 (Del. Super. Ct. Jan. 9, 2024) (“This Court finds that claims in this case seeking damages for injuries resulting from out-of-state or global greenhouse emissions and interstate pollution, are preempted by the CAA.”).
390. Dowell, supra note 207, at 40.
393. Dowell, supra note 207, at 40–42.
laws. But even if some right to farm laws do preclude some nuisance claims in some circumstances, they often do not affect tort liability under other causes of action. Many expressly prohibit only nuisance, or nuisance and trespass. Thus, notwithstanding significant variation in right to farm laws' scope, at least some states' statutes should permit, for example, negligence claims that might be made against agricultural facilities for their failure to adapt to the increased risks associated with a changing climate.

Tort theories, while complex and underexplored, appear to hold some promise for climate change and animal agriculture litigants. Federal common law tort claims may not be statutorily displaced, unlike similar claims relating to fossil fuels; some state tort claims may evade preemption and right to farm laws, including claims based on failures to adapt farming facilities to increasingly severe weather events. Faced with these persistent uncertainties, however, some plaintiffs may look to other bodies of law in which relevant duties and obligations have been more clearly defined.

C. Financial Claims

Climate change is already exacting a harsh economic toll, and future costs are projected to be even more severe. Animal agricu-
ture is subject to a broad spectrum of climate-related financial risks. As a driver of climate change with substantial responsibility for GHG emissions, animal agriculture faces reputational, regulatory, and litigative exposure. The industry is also itself directly vulnerable to climate impacts, including via decreased yields and increased costs of animal feed crops, harms to animals themselves, and damage to physical infrastructure. Given meat’s high price elasticity relative to other food products, resulting increases in meat prices could have a significant dampening effect on sales. A recent analysis by

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400. See discussion supra Part II.
401. See, e.g., Sato et al., supra note 6 (concluding that "lenders, financial regulators, and governments should consider climate litigation risk as a relevant financial risk in a warmer future"); Leander Raes et al., A Guide to Investing in Landscape Restoration to Sustain Agrifood Supply Chains, IUCN 10 (2023), https://portals.iucn.org/library/sites/library/files/documents/2023-010-En.pdf ("Many food and agribusiness are increasingly requested to disclose climate and nature risks."); FAIRR & Int’l Inst. for Applied Sys. Analysis, Coller FAIRR Climate Risk Tool: The Financial Impact of Climate Change on the Livestock Sector 12 (2023), https://go.fairr.org/2023-Coller-FAIRR-Climate-Risk-Tool-Public-Report [on file with the Journal] [hereinafter FAIRR Livestock Financial Climate Risk] (finding that animal agriculture "companies will be particularly vulnerable to climate-related regulatory and market risks") (emphasis in original); Thom Wetzer et al., Climate Risk Assessments Must Engage with the Law, 383 SCIENCE 152, 152 (2024) ("[L]egal action [including climate litigation and regulatory enforcement] shifts or amplifies physical and transition risk exposures and creates additional climate risk exposures.").
402. E.g., Michelle Nowlin & Emily Spiegel, Much Ado About Methane: Intensive Animal Agriculture and Greenhouse Gas Emissions, in RESEARCH HANDBOOK ON CLIMATE CHANGE AND AGRICULTURAL LAW 228, 243 (Mary Jane Angelo & Anél Du Plesis eds., 2017) ("Livestock production is not only a contributor to climate change, but also a sector deeply affected by it."); David Carlin et al., U.N. Env’t Programme Fin. Initiative, Climate Risks in the Agriculture Sector, 7–9 (2023), https://www.unepfi.org/wordpress/wp-content/uploads/2023/03/Agriculture-Sector-Risks-Briefing.pdf (noting heat stress cost the average dairy thirty-nine thousand dollars in 2010, or roughly $1.2 billion nationally); C.M. Godde, et al., Impacts of Climate Change on the Livestock Food Supply Chain; A Review of the Evidence, 28 GLOB. FOOD SEC. 1 (2021).
403. Tatiana Andreyveda et al., The Impact of Food Prices on Consumption: A Systematic Review of Research on the Price Elasticity of Demand for Food, 100 AM. J. PUB. HEALTH 216 (2010). Indeed, though many consumers express a preference for sustainable foods, relative prices appear to play a key role in consumers’ actual purchasing decisions. See Glynn T. Tonsor, Jayson L. Lusk, & Ted C. Schroeder, Market Potential of New Plant-Based Protein Alternatives: Insights from Four US Consumer Experiments, 45 APPL. ECON. PERSPECTIVES & POL’Y 164, 174 (2022) (finding that price changes have small but significant cross-product impacts on consumption of
the FAIRR Initiative found that the world’s largest meat and dairy companies are positioned to lose significant value due to climate change, including through shifts in consumer demand, new climate-related regulations and taxes, and the direct costs of a warming climate, such as expected spikes in the price of feed crops.404

As discussed in this Part, financial stakeholders from shareholders to pension beneficiaries are aware of the climate risks facing industries like fossil fuels; some have sued to protect the value of their investments, basing their complaints on corporate fiduciary duties and financial laws. Financiers themselves have been sued in efforts to interrupt investments in emissions-intensive industries. Such lawsuits are grounded in the idea that a failure to mitigate and address climate risks is bad for the business itself.405 These dynamics and rationales apply in equal or greater measure to the business of animal agriculture.

Shareholders of animal agriculture corporations may consider derivative suits against directors406 for breaching their fiduciary duties by inadequately addressing the risks that climate change poses to corporate profits.407 A shareholder derivative action is a suit in equity brought by the shareholders of a corporation, whether individuals or institutional investors, against directors for harm caused by their breach of fiduciary duties.408 Because the harm alleged is that suf-
fered by the company, any recovery is awarded to the company. The harm to the shareholders is indirect (or derivative) in that the general diminution of the value of the company harms shareholders’ investments.

Corporate directors have broad discretion to make business decisions, but that discretion is meaningfully constrained by their duties of care and loyalty. The duty of care requires that directors “act in an informed and deliberate manner in making decisions about the corporation,” utilizing “all material information reasonably available to them.” The duty of loyalty requires that corporate directors “act in good faith, lawfully, and in the best interest of the company” and is primarily concerned with preventing conflicts of interest and self-dealing. The duties of care and loyalty together give rise to a duty of disclosure, which requires directors “to disclose fully and fairly all material information within the board’s control when it seeks shareholder action.”

411. There are several specific obstacles that plaintiffs in shareholder derivative suits must overcome, including the contemporaneous and continuous share ownership rules, security for expense statutes, the business judgment rule, the demand requirement, and special litigation committees. See also Richard C. Brown, Shareholder Derivative Litigation and the Special Litigation Committee, 42 U. Pitt. L. Rev. 601, 604 (1982).
413. Smith, 488 A.2d at 872 (quoting Aronson v. Lewis, 473 A.2d 805, 812 (1984)). Limiting the duty of care, Delaware courts apply a gross negligence standard, rendering the safeguard more procedural than substantive (in other words, focusing on the process of decision-making rather than the outcome). Id. at 873; Brehm v. Eisner, 746 A.2d 244, 264 (Del. 2000). States may also allow corporations to limit liability for breaches of the duty of care via exculpation clauses in their certificates of incorporation. See, e.g., Del. Code Ann. tit. 8, § 102(b)(7) (2022).
414. Williams, supra note 413, at 1891; Matheson, supra note 408, at 336–37.
416. Stroud v. Grace, 606 A.2d 75, 84 (Del. 1992); see also Williams, supra note 413, at 1887 (explaining that the duty of disclosure requires directors to share “economically significant
Since the mid-1990s, some courts have come to recognize an important additional fiduciary duty: the duty of oversight or monitoring. In In re Caremark International Inc. Derivative Litigation, the Delaware Court of Chancery held that the duty of care included a duty to provide for an “adequate” “corporate information and reporting system.”418 The Delaware Supreme Court reaffirmed this duty in 2006 in Stone v. Ritter, holding that directors breach their fiduciary duties if they “fail to act in the face of a known duty to act, thereby demonstrating a conscious disregard for their responsibilities.”419 A so-called “Caremark claim” requires plaintiffs to prove directors’ failure either “to implement any reporting or information system or controls” or “to monitor or oversee [the reporting system’s] operations thus disabling themselves from being informed of risks or problems requiring their attention.”420 While Caremark claims have not yet been brought based on climate risks421 and have historically been difficult to prove,422 recent developments suggest that the standards are loosening.423

Fiduciary duties serve to ensure that corporate directors act in the company’s best interest, often defined with reference to shareholder wealth maximization.424 Key to the context of long-horizon prob-
lems like climate change is whether these concepts permit—or even require—directors to consider the long-term effects of their decisions rather than maximizing only short-term outcomes. Delaware courts have acknowledged that, at least as to the duty of loyalty, directors must include long-term considerations.\(^ {425}\)

Shareholder derivative suits invoking fiduciary duties have become an important tool of corporate governance,\(^ {426}\) and are increasingly grounded in notions of corporate social responsibility that appear broader than wealth maximization alone.\(^ {427}\) For example, a 2006 derivative suit against BP for major environmental and safety failures led to significant corporate governance and oversight reforms, including tying executive compensation to environmental, health, and safety performance.\(^ {428}\) Shareholder derivative suits have also been filed to address sexual harassment and sex discrimination in the workplace,\(^ {429}\) as well as in response to companies’ failures to take adequate safety measures during the COVID-19 pandemic.\(^ {430}\)

At the confluence of trends in climate litigation and shareholder derivative suits lie actions intended "to create liability for corporate directors who fail to consider and properly address significant levels of GHG emissions."\(^ {431}\) Shareholder derivative actions could press di-

\(^ {425}\). In re Trados Inc. S’holder Litig., 73 A.3d 17, 37 (Del. Ch. 2013) [quoting DEL. CODE ANN. tit. 8, § 102(b)(5) (2012) and § 122(1) (1953)] (“A Delaware corporation, by default, has a perpetual existence . . . [T]he duty of loyalty therefore mandates that directors maximize the value of the corporation over the long-term . . . .”); see also Frederick Hsu Living Tr. v. ODN Holding Corp., No. 12108–VCL, 2017 WL 1437308, at *18 (Del. Ch. 2017). Some scholars have questioned the dominance of the shareholder maximization norm and asked whether directors could choose to privilege other goals above shareholder profits. Heminway, supra note 424, at 948, 951.

\(^ {426}\). Loewenstein, supra note 409, at 4.

\(^ {427}\). Williams, supra note 413, at 1879.


\(^ {431}\). Bradley Cosman, Green Derivatives: Extorting Reductions in Greenhouse Gas Emissions via Shareholder Derivative Suits, 40 Ariz. St. L.J. 743, 745 (2008); see also Benjamin, supra note
rectors, in the discharge of their fiduciary duties, to consider the threat that climate change poses to corporate profits.432 Exxon Mobil shareholders have filed numerous derivative suits claiming that Exxon directors have misrepresented climate-related risks and failed to adequately account for the costs of climate adaptation.433 The nonprofit ClientEarth, with support from institutional investors, filed a derivative lawsuit against Shell’s directors in the United Kingdom, which was ultimately dismissed for failure to state a claim.434 ClientEarth’s CEO has vowed that more lawsuits against company directors for failures to meet their fiduciary duties in respect of climate “will absolutely come.”435

The fraud and misrepresentation on which shareholder derivative suits can be based could also give rise to securities class actions seeking to recover economic losses suffered by plaintiff investors, rather than harms incurred by the corporation itself.436 Some securities class actions alleging climate-related misrepresentations by fossil fuel companies have already been filed, claiming violations of securities laws prohibiting deception.437 Securities class actions may


432. Benjamin, supra note 412, at 319; see also Perry E. Wallace, Climate Change, Corporate Strategy, and Corporate Law Duties, 44 WAKE FOREST L. REV. 757, 760 (2009); Williams, supra note 413, at 1908; Cosman, supra note 431, at 745.


also rest on climate-washing and green-washing allegations. As climate disclosures become more robust and climate change inflicts deeper economic losses on animal agriculture investors, animal agriculture’s GHG emissions, climate risk planning, and representations to investors may become the subject of such challenges.

Providing another useful tool, every state grants shareholders the right to inspect the books and records of corporations in which they hold stock. Section 220 of the Delaware Code is a model. Although a Section 220 books and records inspection is formally independent of shareholder derivative litigation, it often functions as a pre-filing mechanism akin to (albeit less extensive than) discovery, allowing shareholders to acquire information they need to succeed in litigation. Even when a board provides no documents of the requested type, the lack of records can be used by shareholders as evidence of failure of oversight in a Caremark claim.

In order to inspect a corporation’s books and records, a shareholder must have a “proper purpose.” Investigating corporate mismanagement, including breaches of fiduciary duty, in order to bring derivative litigation or pursue other remedies qualifies as such. Once shareholders have demonstrated a proper purpose, they are entitled to inspect those books and records “necessary to


439. *Infra* notes 557, 561–566 and accompanying text.


441. DEL. CODE ANN. tit. 8, § 220 (2010).


444. *KT4 Partners*, 203 A.3d at 758 (“[I]f a company has no documents at all … that itself is information a § 220 petitioner can use . . . .”); Woods v. Sahara Enter., Inc., 238 A.3d 879, 896 (2020) (“It would be an exceptional board of directors that could satisfy its duty of oversight without creating any books and records.”).

445. DEL. CODE ANN. tit. 8, § 220 (2010); see also Woods, 238 A.3d at 889 (citing CM & M Gp., Inc. v. Carroll, 453 A.2d 788, 792 (Del. 1982)). “Proper purposes” has been broadly interpreted. See, e.g., *Woods*, 238 A.3d at 889 (“There is no shortage of proper purposes.”).

accomplish” it, including emails, text messages, and other informal forms of electronic communications in certain circumstances.448

Books and records inspections could support shareholder derivative litigation related to animal agriculture corporations' GHG emissions in several ways, including by demonstrating that shareholders have exhausted available tools before initiating litigation. Information uncovered through this process may strengthen claims that directors breached their duty of oversight if, for example, they made no good-faith effort to consider the risks of climate change. Shareholders have already begun using books and records inspections to develop climate change-related litigation449 and target other misconduct in the animal agriculture industry.450 In Australia, for example, shareholders succeeded in a claim to inspect documents related to the target bank’s application of its own climate policies to fossil-fuel lending decisions.451

Non-litigative shareholder proposals, also known as resolutions, are also available to qualified shareholders of publicly traded companies.452 Unless the company “file[s] its reasons” for excluding a proposal with the SEC, resolutions are included alongside management's proposals in the corporation’s proxy materials for a shareholder vote.453 Changes to SEC policy during the Biden Administra-

447. AmerisourceBergen Corp., 243 A.3d at 427. Under this standard, “the court must give the petitioner everything that is ‘essential,’ but stop at what is ‘sufficient.’” KT4 Partners, 203 A.3d at 752 (citing Amalgamated Bank v. Yahoo! Inc., 132 A.3d 752, 775 (Del. Ch. 2016)).


452. Matthew J. Petrozziello, Beyond Cracker Barrel: Shareholder Proposals as a Means of Effectuating CSR Policies, 13 RUTGERS BUS. L.J. 22, 23 (2016); Elise N. Rindfleisch, Shareholder Proposals: A Catalyst for Climate Change-Related Disclosure, Analysis, and Action, 5 BERKELEY BUS. L.J. 45, 48 (2008). To qualify to submit a proposal, a shareholder must have held at least $2,000 in market value for at least three years, $15,000 for at least two years, or $25,000 for at least one year. 17 C.F.R. § 240.14a-8(b)(1)(i) (2023).

453. 17 C.F.R. § 240.14a-8(j) (2023); Rindfleisch, supra note 452, at 57.
tion have made climate-related proposals more likely to survive company efforts to exclude them.\textsuperscript{454}

While proposals are non-binding even if adopted, boards can face consequences if they fail to respond or implement them.\textsuperscript{455} Moreover, advocates of proposals often measure their success by indicators other than majority shareholder support or implementation of the exact reform requested.\textsuperscript{456} For example, shareholder proposals relating to social policy issues can attract significant media attention and raise public awareness, boosting the reputational consequences of corporate decision-making.\textsuperscript{457} Shareholder proposals are also expensive for corporations to include on the ballot,\textsuperscript{458} so filing them can give shareholders leverage to trade their withdrawal for desired reforms.\textsuperscript{459}

Shareholder proposals regarding GHG emissions have had some success in changing corporate priorities,\textsuperscript{460} including among major

\textsuperscript{454} SEC Staff Legal Bulletin No. 14L (Nov 3, 2021) ("Going forward we would not concur in the exclusion of [climate-related] proposals that suggest targets or timelines so long as the proposals afford discretion to management as to how to achieve such goals."); Cydney Posner, SEC Proposes to Narrow Three Substantive Exclusions in the Shareholder Proposal Rule, HARV. L. SCH. F. ON CORP. GOVERNANCE (Aug. 8, 2022), https://corpgov.law.harvard.edu/2022/08/04/sec-proposes-to-narrow-three-substantive-exclusions-in-the-shareholder-proposal-rule [https://perma.cc/VG36-CNFY].

\textsuperscript{455} James J. Hanks, Jr. et al., Responding to Stockholder Proposals, Director Elections and Say-On-Pay Votes, VENABLE (Nov. 4, 2022), https://www.venable.com/insights/publications/2022/11/responding-to-stockholder-proposals-director [https://perma.cc/VBK2-PQBB] (discussing proxy advisory firms’ responses to non-implementation of proposals, including one prominent firm’s recommendation to vote against directors if no action is taken on proposals supported by as little as 20% of shareholders).

\textsuperscript{456} Summer Hallaj, A Decent Proposal: How Animal Welfare Organizations Have Utilized Shareholder Proposals to Achieve Greater Protection for Animals, 47 J. MARSHALL L. REV. 795, 808–09 (2013); see also Petrozziello, supra note 452, at 30–32.

\textsuperscript{457} Petrozziello, supra note 452, at 31.

\textsuperscript{458} Hallaj, supra note 456, at 810 ("Corporations frequently choose to negotiate with the proponents of a shareholder proposal, instead of allowing the resolution to be voted down at the annual shareholder meeting, because including a proposal in the corporation’s proxy materials is enormously expensive. The SEC has estimated that it costs a corporation $87,000 to include a proposal in its proxy materials.").

\textsuperscript{459} Petrozziello, supra note 452, at 31. Approximately 80% of withdrawals lead to some responsive action by the company. Id.

food companies. For example, at its 2022 annual meeting, 70% of Costco's shareholders voted in favor of a proposal asking the company to set science-based targets to reduce its GHG emissions, including supply chain (Scope 3) emissions; Costco committed to new emissions reduction targets the following year.461

Particular categories of stakeholders may consider financially grounded actions specific to their contexts. For example, students have filed complaints with state attorneys general under the Uniform Prudent Management of Institutional Funds Act (adopted by every state but Pennsylvania) seeking to hold their universities accountable for the institutions' investments in fossil fuel companies.462 New waves of complaints, which under the Act can also be lodged against charitable institutions other than universities, might focus on investments in animal agriculture.

Finally, financiers, such as banks and pension funds, are also being sued around the world in "turn off the taps" cases seeking to intercept financial support to heavy-emitting sectors and projects.463 A leading example is the 2023 French "duty of vigilance" lawsuit against BNP Paribas and the complaint to the prosecutor that followed, discussed above, which allege that the bank failed to ade-
quately consider the climate impacts of its investments when providing financial support to a Brazilian meatpacking company despite the bank’s own stated net-zero goals.\textsuperscript{464} The SEC complaint challenging JBS’s issuance of “sustainability-linked bonds” also takes aim at the paths by which animal agriculture accesses financing.\textsuperscript{465} As banks face rising pressure from regulatory guidelines,\textsuperscript{466} industry reform efforts,\textsuperscript{467} shareholder proposals, and other campaigns to improve climate risk management and adopt more ambitious ESG policies, litigation to hold banks to their climate promises may grow.

Animal agriculture is particularly vulnerable to the economic toll of a changing climate. Real-world developments illustrate this peril. At least 2,000 cattle died in southwestern Kansas during a 2022 summer heat wave, generating gruesome reports of carcasses dumped at landfills and others buried in unlined pits, creating health and environmental hazards to surrounding communities.\textsuperscript{468} The summer of 2023 was likewise punishing. The Administrator of the USDA’s Farm Service Agency observed in August that “heat domes plагuing many parts of the country” had proven “unsurvivable for some animals,” calling this “one of the latest, many examples of how a changing climate is creating immediate challenges for farmers and ranchers.”\textsuperscript{469}

Around the world, climate litigation relating to the financial risks of fossil fuels is expanding, and there are already preliminary exam-

\textsuperscript{464.} Supra notes 151–155 and accompanying text.
\textsuperscript{465.} Supra note 264 and accompanying text.
\textsuperscript{467.} E.g., Net-Zero Banking Alliance, U.N. ENV’T PROGRAMME FIN. INITIATIVE, https://www.unepfi.org/net-zero-banking [https://perma.cc/P7XY-QCBF] (convening banks representing over 40% of global banking assets “which are committed to aligning their lending and investment portfolios with net-zero emissions by 2050”).
amples of such claims in relation to animal agriculture. It seems likely that the industry’s financial exposure will be the subject of increasing attention from litigants.

D. Public Trust and Claims Against Government

As discussed above, U.S. litigants are already raising climate-related claims about animal agriculture in suits against government defendants, many under the APA and NEPA. The APA and its state-level analogues allow litigants to bring procedural challenges to administrative agency actions. Nineteen states have NEPA-like environmental review laws, some of which do not contain the categorical exemption for CAFOs that currently exists under the federal statute. All offer critical avenues into court for concerned individuals and organizations and will no doubt continue to play an important role in complaints alleging government failures to grapple with animal agriculture’s climate harms.

The public trust doctrine predates these statutory hooks, yet until recently it played only a minor role in climate-related litigation. The doctrine recognizes governments’ “sovereign legal obligation” to steward “inherently public” resources (usually natural resources, such as tidal waters). Scholars have argued—and some courts have agreed—that the doctrine is part of state and federal common law, though it “is informed by, and enforceable because of, consti-

470. See discussion supra Section IV(A)–(B).
tutional provisions.” Though the breadth of the doctrine is contested and to date there have been no public trust climate lawsuits filed in U.S. courts relating directly to animal agriculture, its recent use in other climate lawsuits may open that door.

Advocates led by Our Children’s Trust have invoked the public trust doctrine in asking courts to compel the executive and the legislature to adequately respond to climate change, perhaps most notably in *Juliana v. United States*. In that case, the district court defined the public trust doctrine as “impos[ing] . . . a fiduciary duty to ‘protect the trust property against damage or destruction,’” owed “equally to both current and future beneficiaries.” The Ninth Circuit admitted the strength of the plaintiffs’ claim that “action is needed” to address climate change, but “reluctantly” dismissed for lack of standing, citing a lack of redressability. The court reached this result in part because of the scale of the mitigatory action necessary to redress the injury of climate change, which the requested relief would only partially ameliorate. In 2023, the district court granted plaintiff’s motion to file a second amended complaint that would resolve prior “standing deficiencies” and allow the case to move forward to trial.

A public trust claim based on a more narrowly tailored injury—such as the failure to protect the public’s interest in public lands by permitting animal agriculture activities to proceed on those lands—might adhere more closely to longstanding precedent than an emphasis on less tangible trust resources (e.g., the atmosphere). Such claims may be more likely to overcome redressability doubts or

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479. *Juliana*, 947 F.3d at 1164.
480. Id. at 1171.
other procedural hurdles. Consider the recent lawsuit alleging that government approval of grazing in the Point Reyes National Seashore would damage public lands and exacerbate local climate change consequences; one could imagine reformulating those claims, which were brought under the APA, under the public trust doctrine. A similarly tailored public-trust action might focus on the negative climate consequences of cattle grazing on vast swaths of public lands throughout the West.

E. Other Statutory Claims

In addition to the APA, NEPA, and other statutes discussed above, numerous other federal and state statutes, as well as state constitutional amendments, may help address animal agriculture emissions; firms’ representations about those emissions; the harmful effects of the industry’s pollution on nearby communities; and the industry’s failure to prepare for climate-related disasters. As noted above, this discussion is inclusive and exploratory.

1. Federal Statutes

a. CERCLA/EPCRA

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Emergency Planning and Community Right-to-Know Act (EPCRA) provide private rights of action for individuals in relation to cleanup costs of contaminated spaces and failures by companies or regulators to disclose required information on hazardous releases. While these statutes allow for lawsuits based on pollution emissions in many other contexts, regulations specifi-
cally exempt air emissions from animal waste. However, a lawsuit filed by several animal protection groups seeks to have the EPCRA exemption declared unconstitutional. And in late 2023, EPA issued a request for comments in support of the potential development of new EPCRA regulations for reporting of agricultural animal waste air emissions.

b. Clean Water Act and Resource Conservation and Recovery Act

The CWA explicitly includes “concentrated animal feeding operation” in its definition of a regulated “point source,” subjecting CAFO pollutant discharges to National Pollutant Discharge Elimination System (NPDES) permitting requirements. In practice, limited enforcement and an exemption for agricultural stormwater discharges means that many polluting CAFOs do not have NPDES permits. Citizen suits challenging such pollution may also invoke climate change, as in Washington State Dairy Federation.

The Resource Conservation and Recovery Act (RCRA) seeks to minimize “the generation of hazardous waste” and ensure any waste that is created is “treated, stored, or disposed of so as to minimize the present and future threat to human health and the environ-

488. See 40 C.F.R. § 355.31(g) (2022).
493. Supra notes 249–251 and accompanying text.
Historically, many courts did not recognize manure from animal agriculture as a regulated solid waste under RCRA. However, in 2015, the Eastern District of Washington decided that manure could be “characterized as a solid waste.” The court found that, “[b]y purposefully composting wet manure on open, native soil which causes manure constituents to leach into and accumulate in the soil,” the dairy farm defendants “discarded those constituents as a solid waste under RCRA.”

Litigation for failure to adapt to the impacts of climate change may be possible under the CWA and RCRA. For example, utilizing the citizen-suit provisions of the CWA and RCRA, the Conservation Law Foundation (CLF) filed four suits against fossil fuel defendants for their failure to prepare their bulk storage facilities for rising sea levels and severe storms, to the detriment of the surrounding communities. To date, most of the claims in three of the cases have survived motions to dismiss for lack of standing, the first motion for partial summary judgment filed by a defendant was denied, and CLF was granted leave to amend its complaint in the fourth. Litigants could pursue a similar case theory against animal agriculture, based, for example, on manure discharges from CAFOs during storms.

c. Endangered Species Act

The ESA provides for citizen suits when agency actions jeopardize the continued existence of species listed as threatened or endangered. While advocates frequently successfully raise climate

497. Id. at 1224; see also Water Keeper All., Inc. v. Smithfield Foods, Inc., 2001 WL 1715730, at *1 (E.D.N.C. Sept. 20, 2001).
499. For further discussion of the Conservation Law Foundation cases in relation to potential tort claims, see supra notes 361–362 and accompanying text.
change as a threat justifying species protections, efforts to use the ESA to force the government to curb GHG emissions have so far been unsuccessful. Consider the polar bear. In 2008, following a lawsuit, the polar bear became the first animal protected under the ESA due to the effects of climate change. Although the U.S. Fish & Wildlife Service linked GHG emissions to the ice loss threatening the bears, the agency concluded that the ESA was not the appropriate tool with which to seek emissions limits.

Challenging that conclusion, the Center for Biological Diversity has sued to require federal agencies to consider climate change impacts in their determinations about projects that may impact endangered species. The suit alleges that the Department of the Interior’s authorization of offshore oil and gas activities endangers several aquatic species by contributing to climate change and ocean warming and that the Department’s failure to consider climate in its impact analysis makes the drilling authorization unlawful under the ESA. If successful, this case could open up new avenues to use the ESA to challenge animal agriculture projects that benefit from federal authorization or support. New methods of quantifying the negative consequences of specific GHG emissions sources for particular endangered species may also play a role in “unlocking” the ESA to address those emissions.

501. Jennifer Hijazi, Climate Change Looms Large in Endangered Species Litigation, E&E News (July 2, 2019), https://www.eenews.net/articles/climate-change-looms-large-in-endangered-species-litigation/ [https://perma.cc/W53G-TQHU]; Mackenzie Landa, Species Protection as a Natural Climate Solution, in WHAT CAN ANIMAL LAW LEARN FROM ENVIRONMENTAL LAW 431, 445 (Randall S. Abate ed., 2020); see also, e.g., W. Watersheds Project v. McKay, No. 22-35706, 2023 WL 7042541, at *2 (9th Cir. Oct. 26, 2023) (remanding to Fish & Wildlife Service for a new biological opinion as required by the ESA, “to consider whether the small frog population could sustain grazing-related impacts on top of potential climate change effects, which, according to documents in the record, include stranding and higher egg mortality due to increased exposure to ultraviolet radiation and pathogens”).


505. Id. at 29, 32.

506. Steven C. Amstrup & Cecilia M. Bitz, Unlock the Endangered Species Act to Address GHG Emissions, 381 SCIENCE 949, 951 (2023); see also Warren Cornwall, Lawyers Said It Was Impossible to Tie a Specific Dose of Greenhouse Gases to Polar Bear Survival. They Were Wrong, ANTHROPOCENE (Sept. 6, 2023), https://www.anthropocenemagazine.org/2023/09/lawyers-said-it-was-impossible-to-tie-a-specific-dose-of-greenhouse-gases-to-polar-bear-survival-
d. Federal Land Policy & Management Act

A private cause of action is available under the Federal Land Policy and Management Act (FLPMA) of 1976, which charges the Bureau of Land Management (BLM) with “protect[ing] the quality of” public lands.507 Environmental organizations have used the FLPMA with some success to challenge the granting of permits on the basis that the BLM has failed to adequately assess environmental impacts.508 While to date no climate lawsuits have been filed under the FLPMA, the language of the statute (which refers to the need to provide for “present and future needs”), coupled with Congress’ apparent intent to make the statute a strong tool for environmental protection, has led some commenters to suggest that it could be useful in seeking to address climate change, including by targeting livestock grazing on federal public lands.509

e. Racketeer Influenced & Corrupt Organizations Act

The Racketeer Influenced and Corrupt Organizations Act (RICO) provides a federal civil cause of action for illegal acts performed in the service of some enterprise.510 Though RICO was originally passed to deal primarily with organized crime, the statute has since been applied to defendants ranging from anti-abortion protesters to international sports associations.511 A RICO plaintiff typically must

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507. 43 U.S.C. § 1701(a)(8).
prove that the defendant engaged in a "pattern of racketeering activity" and invested in, maintained an interest in, or participated in an "enterprise" affecting interstate or foreign commerce.\textsuperscript{512} "Racketeering" activities are statutorily defined but their extent is still subject to some debate. Fraud and false advertising claims brought under RICO are increasingly common, often founded on predicate acts of wire or mail fraud.\textsuperscript{513}

The first climate case to include RICO claims was filed in the District Court of Puerto Rico in 2022. Plaintiff Puerto Rican municipalities allege that defendant fossil fuel companies knowingly contributed to climate change and hid information linking their products to climate harms.\textsuperscript{514} In 2023, the City of Hoboken alleged violations of New Jersey’s state RICO law in its own suit against fossil fuel companies.\textsuperscript{515} If evidence were discovered showing a coordinated effort of deception about climate change, then RICO could provide a path forward for lawsuits against animal agriculture firms and their associates on fraud and false advertising grounds.

f. Tariff Act of 1930

The Tariff Act of 1930 prohibits the importation into the United States of any goods made "wholly or in part" using forced labor or indentured servitude.\textsuperscript{516} Under the Tariff Act, an individual or org-
organization may file a petition with U.S. Customs and Border Protection, which then conducts an investigation to determine whether to prohibit the imports from entering the country.517 Evidence suggests that parts of the GHG-intensive Brazilian beef industry, for example, depend on forced labor; a Tariff Act petition might seek to limit imports of products linked thereto.518

\[\text{g. Freedom of Information Act}\]

FOIA, which creates a broad right to access federal government agency information,519 has been used extensively in support of climate litigation and advocacy.520 The Act and its state law analogs521 have a number of enumerated exemptions, including classified information, trade secrets, and commercial or financial information that is confidential or privileged.522 Documents that are obtained through public records requests—or through litigation to compel disclosures by recalcitrant agencies523—could prove useful to advocates in challenges to, for example, climate-related agency interactions with the animal agriculture industry.

\[\text{2. State Statutes and Constitutional Amendments}\]

As discussed above, state consumer protection acts empower individuals, market competitors, government entities, and other organizations to file claims for false advertising and deceptive trade practices.524 Also as noted, many states have statutes similar to the

\[\text{Footnotes}\]


519. 5 U.S.C. § 552.


523. See supra note 244 and accompanying text (discussing FOIA lawsuit against FSIS to compel disclosure of documents related to a major beef producer’s “climate friendly” marketing).

524. See discussion supra Section V(A).
federal APA, FOIA, NEPA, and RICO. Additionally, several states have statutes or constitutional amendments specifically addressing climate, environmental rights, or environmental justice, many of which create private rights of action.525

The earliest wave of “green” constitutional amendments, passed at the height of the environmental movement in the 1970s, created broad legal rights to a healthy environment. More recent amendments establish a fundamental right to a healthy environment and explicitly create private rights of action.526 While green amendments that are not self-executing may only provide a cause of action where the state has failed to fulfill an affirmative duty, self-executing amendments (i.e., those creating a private right of action) allow suits aimed at addressing gaps in state regulation of private parties.527

Green amendments have proved amenable to broad interpretation by state courts. For instance, the Pennsylvania Supreme Court has read its amendment to grant “two separate rights” to state citizens and to impose corresponding constraints and duties on the state government: a “right of citizens to clean air and pure water, and to the preservation of . . . the environment,” and “the common ownership by the people, including future generations, of Pennsylvania’s public natural resources,” held in “public trust” by the Commonwealth.528 The Hawaii Supreme Court has determined that Hawaii’s amendment provides “a protectable property interest in a clean and healthful environment” backed by the state’s constitutional due process guarantee.529 In this vein, a series of suits filed by Our Children’s Trust asks state courts to construe green amendments to address GHG emissions. The first of these cases to reach trial in the United States, Held v. State of Montana, was brought under Mon-

525. These laws may also interact helpfully with common law principles such as public trust, discussed supra Section V(D). See Alexandra Klass, The Public Trust Doctrine in the Shadow of State Environmental Rights Laws: A Case Study, 45 ENV’T L. 431 (2015).
527. Id.
The trial court issued a judgment in the plaintiffs’ favor, affirming the right and invalidating state statutes that had barred consideration of GHG emissions and climate impacts in government decision-making. Experts have described the thorough decision as “one of the strongest decisions on climate change issued by any court anywhere,” noting that “the significance of [green constitutional] amendments is now emerging full force.” Though the Montana Supreme Court has agreed to hear the state’s appeal, the Court refused to stay the district court’s judgment in the interim.

Several states have broad environmental rights acts that allow municipalities, agencies, and individuals to file suits directly to pro-


tect the environment. For example, *Rhode Island v. Shell Oil Co.*, one of the “Carbon Majors” cases, involved a violation of the state environmental rights act alongside common law liability theories.

Other states have enacted additional environmental review requirements for projects with environmental justice implications. California, Connecticut, Massachusetts, New Jersey, New York, Vermont, and Washington have recently adopted or amended statutes requiring agencies to consider environmental justice impacts when making permitting or other decisions. These laws create opportunities to challenge state regulatory decisions that threaten to harm underserved communities disproportionately burdened with pollution and climate impacts.

New York is an important state to watch because of significant recent policy changes and the potential for dynamic interplay among

537. CAL. GOV’T CODE § 65302(h) (West 2023).
538. CONN. GEN. STAT. § 22a-20a (2023).
539. Governor Baker Signs Climate Legislation to Reduce Greenhouse Gas Emissions, Protect Environmental Justice Communities, MASS. STATE GOV’T (Mar. 26, 2021), https://archives.lib.state.ma.us/server/api/core/bitstreams/dd5470b5-613b-4844-b075-0a84fc5560a/content [on file with the Journal]. The act also sets climate targets, including a 50 percent reduction in GHG emissions by 2030 and a 75 percent reduction by 2040. *Id.* But federal court decisions may have weakened Massachusetts’ law. In *Town of Weymouth v. Massachusetts Department of Environmental Protection*, the First Circuit declined to force the Department of Environmental Protection to consider environmental justice concerns in a permitting process for a natural gas compression facility, even though the proposed site was within five miles of several environmental justice communities. 961 F.3d 34, 54 (1st Cir. 2020). In 2021, notwithstanding the law’s passage, the First Circuit cited *Town of Weymouth* in dismissing another environmental justice suit. City of Quincy v. Mass. Dep’t of Envt Prot., 21 F.4th 8, 19 (1st Cir. 2021).
541. N.Y. ENV’T CONSERV. LAW § 70-0118 (Consol. 2024).
543. WASH. REV. CODE § 70A.02.080 (2023).
544. Virginia has also recently enacted an environmental justice act providing that it is the state’s policy “to promote environmental justice and ensure that it is carried out throughout the Commonwealth.” VA. CODE ANN. § 2.2-235 (2020). The act recently played a role in a major permit denial. Patrick Larsen, Key Mountain Valley Pipeline Structure Fails to Get Permit Approval, VPM NPR NEWS (Dec. 3, 2021), https://www.vpm.org/news/2021-12-03/key-mountain-valley-pipeline-structure-fails-to-get-permit-approval [https://perma.cc/9ARW-ZZCT].
its statutes. A new constitutional amendment took effect in 2022, providing that “[e]ach person shall have a right to clean air and water, and a healthful environment.” 546 Commentators have predicted that the amendment will be interpreted as self-executing. 547 The state also recently passed arguably the nation’s “strongest” environmental justice law, 548 and adopted the Climate Leadership and Community Protection Act (CLCPA), which requires the state to target a 40 percent reduction of economy-wide GHG emissions from 1990 levels by 2030, followed by an 85 percent reduction by 2050. 549 CLCPA has already triggered permit denials for major fossil fuel projects, 550 and although it exempts emissions “from livestock” from its coverage, it does not appear either to exempt other types of agricultural emissions or to limit any pre-existing regulatory authority over enteric methane. 551 Together with the state’s new green amendment, these policies offer fertile soil for potential lawsuits with multiple interacting causes of action. 552

F. Cross-Border Theories

Potential claims in U.S. courts relating to animal agriculture’s climate responsibility will also be informed by both economic and reg-

546. N.Y. Const. art. 1 § 19.
548. Michael B. Gerrard & Edward McTiernan, New York Adopts Nation’s Strongest Environmental Justice Law, N.Y.L.J. (May 10, 2023). The statute, which takes effect in December 2024, provides that the Department of Environmental Conservation shall not issue renewals of certain permits “if it determines that the project would significantly increase the existing disproportionate pollution burden on the disadvantaged community.” N.Y. ENV’T CONSERVATION LAW § 70-0118.
549. New York State Climate Leadership and Community Protection Act, 2019 N.Y. LAWS 106.

the Corporate Sustainability Reporting Directive (CSRD), an EU ESG disclosure requirement that came into force in January 2023 and must be implemented in EU national laws by mid-2024, will reach more than 10,000 non-EU companies—about a third of which are based in the United States.\(^{561}\) The CSRD requires GHG emissions disclosures (including of Scope 3 emissions) and reduction plans aligned with the Paris Agreement.\(^{562}\) Even U.S. companies that are not themselves covered by the CSRD may be required by their trading partners to disclose relevant information if they are in the supply chains of covered EU companies.\(^{563}\)

Many firms may soon be subject to similar climate disclosure rules directly under U.S. law. California’s 2023 rule will require Scope 3 disclosures and has broad sectoral reach: it applies to both public and private companies with global revenues of at least $1 billion that meet a minimal trigger of “doing business in California.”\(^{564}\) The SEC proposed a similarly robust ESG disclosure regulation in 2022.\(^{565}\) However, in its final form, adopted in March 2024, the SEC rule does

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561. Dieter Holger, At Least 10,000 Foreign Companies to Be Hit by EU Sustainability Rules, WALL ST. J. (Apr. 5, 2023), https://www.wsj.com/articles/at-least-10-000-foreign-companies-to-be-hit-by-eu-sustainability-rules-307a1406 [on file with the Journal]. U.S. companies within the CSRD’s expanding ambit currently include those with listed securities on EU regulated markets; annual EU revenues of more than €150 million and an EU branch with net revenue of more than €40 million; or an EU subsidiary that meets the criteria for a “large company.” Id.

562. CSRD Directive, supra note 557, arts. 19a.2(a)(iii), 29b.2(a)(1). Most of the animal agriculture industry’s emissions are upstream, Scope 3 emissions. See EMISSIONS IMPOSSIBLE MEAT AND DAIRY, supra note 24, at 5.


564. Climate Corporate Data Accountability Act, 2023 Cal. Legis. Serv. Ch. 382 (West) (requiring disclosure of scope 1, 2, and 3 emissions); see also S.B. 261, 2023 Cal. Legis. Serv. Ch. 383 (West) (requiring disclosure of climate-related financial risks); David Smith, Why All Cos. Should Take Note of Calif. GHG Disclosure Laws, LAW360 (Oct. 10, 2023), https://www.law360.com/articles/1729666/why-all-cos-should-take-note-of-calif-ghg-disclosure-laws [on file with the Journal] (noting that smaller companies in the covered companies’ supply chains may be required by their trading partners to supply their own disclosure information).

not include Scope 3 disclosure requirements.\footnote{566} The SEC noted in its final rule that “[c]ommenters in the agricultural sector were particularly opposed” to defining disclosure-triggering “climate-related risks” to include “the negative impacts on a registrant’s value chain . . . because it would impose costs and burdens on farmer and rancher suppliers.”\footnote{567} Prominent political leaders amplified those objections.\footnote{568}

Even in its narrowed form, the SEC rule faces headwinds, likely from disappointed regulatory beneficiaries as well as from regulated parties and even states.\footnote{569} Likewise, industry plaintiffs, including the American Farm Bureau Federation, have already brought a challenge to the California rule on First Amendment, Supremacy Clause, and dormant Commerce Clause grounds.\footnote{570} Any disclosure requirements that survive such challenges will deliver more information to potential litigants about animal agriculture companies and their emissions, climate plans, and commitments. As broad due-diligence obligations gain ground, new information about other harms endemic in multinational animal agriculture supply chains, such as the deforestation

\footnote{566. Final Rule, \textit{The Enhancement and Standardization of Climate-Related Disclosures for Investors}, RIN 3235-AM87 (Mar. 6, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, and 249).}

\footnote{567. \textit{Id.} at 87; see also Nat’l Cattlemen’s Beef Assoc. et al., Comments by Agricultural Associations on SEC’s Proposed Rules on the Enhancement and Standardization of Climate-Related Disclosures for Investors (File No. S7-10-22) (June 17, 2022), https://www.sec.gov/comments/s7-10-22/s71022-20132091-302573.pdf [on file with the Journal]; Morris & Jacquet, supra note 61, at 23.}

\footnote{568. See, e.g., Letter from Jon Tester, U.S. Senator, and Kyrsten Sinema, U.S. Senator, to The Honorable Gary Gensler, Chairman, U.S. Securities and Exchange Commission (Jan. 24, 2024), https://www.sec.gov/comments/s7-10-22/s71022-415340-983822.pdf [on file with the Journal] (“W[e] respectfully ask that you work to ensure that any final rule does not create new regulatory burdens for family farmers and ranchers. We are particularly concerned that, as written, the proposed rule’s Scope 3 emissions reporting requirements could indirectly penalize small agriculture producers . . . .”).}

\footnote{569. Stefania Palma, Aime Williams, & Patrick Temple-West, ‘Sued on Both Sides’: SEC Braces for Lawsuits from Supporters and Critics of Climate Rule, FIN. TIMES (Mar. 7, 2024), https://www.ft.com/content/f1c5066e-9656-4258-9f14-d3df87a9535 [on file with the Journal]; Sarah Jarvis, 8th Circ. Wins SEC Climate Rule Litigation Lottery, LAW360 (Mar. 21, 2024), https://www.law360.com/articles/1816307 [on file with the Journal] (reporting that cases challenging the rule will be consolidated and heard by the Eighth Circuit).}

\footnote{570. See Complaint for Declaratory and Injunctive Relief at 3, Chamber of Commerce v. California Air Resources Board, No. 2:24-cv-00801 (C.D. Cal. Jan. 30, 2024). The complaint discusses at some length the alleged effect of the “burden of estimating Scope 3 emissions” on named cattle-rancher plaintiffs. \textit{Id.} at 15–16.}
Multilateral institutions may provide fora in which to raise non-litigation challenges to the industry’s emissions, as evidenced by the IACHR and OECD complaints discussed above.\textsuperscript{573} Lastly, as litigation relating to animal agriculture’s climate responsibility moves forward in other countries, litigants in those foreign court proceedings may utilize 28 U.S.C. § 1782 to obtain relevant evidence from U.S. persons or companies.\textsuperscript{574}

VI. CONCLUSION

Despite mounting enthusiasm for ambitious litigation as an essential tool in the fight against climate change, no lawsuits in the United States, and only a few worldwide, have explicitly sought to hold animal agriculture companies responsible for their GHG emissions. Yet such suits hold real promise. Notwithstanding some judicial reluctance to expand common-law liability to cover climate change harms, early indications from several pending suits suggest that this strategy has potential. Additional litigation activity grounded in consumer protection theories and climate-related financial risk also seems likely. Meanwhile, lawsuits in both foreign and U.S. courts have targeted government support for the production of meat and dairy—and, by extension, government complicity in the associated emissions. U.S. plaintiffs regularly invoke procedural and environmental statutes to oppose adverse administrative actions related to climate change and animal agriculture, with some success (especially at the state and local levels). Non-judicial grievance mechanisms offer further paths by which to increase awareness and shape public discourse in favor of constraints on animal agriculture’s GHG emissions.

Building on these foundations, this Article has sought to chart potential U.S. legal strategies that litigants focused on the climate

\textsuperscript{571} Supra notes 143–155 and accompanying text.

\textsuperscript{572} SETZER & HIGHAM, supra note 70, at 44 (predicting that such topics are “likely to be the subject of an increasing volume of litigation in coming years”).


\textsuperscript{574} 28 U.S.C. § 1782.
hazards of animal agriculture might embrace. Of course, litigation is an imperfect tool for addressing climate change, which in any case is just one of many externalized harms of industrialized animal agriculture. Nevertheless, there are compelling reasons to believe advocates might choose to dedicate some of their inevitably limited resources to the types of lawsuits discussed herein.

Perhaps most fundamentally, time is short. According to a 2023 U.N. report, to meet climate goals and avoid the worst effects of climate change, emissions must be cut nearly in half by 2030—now less than six years away. But the report paints a grim picture of progress to date: “[W]ith a climate cataclysm looming, the pace and scale of current climate action plans are wholly insufficient to effectively tackle climate change.”575 Even dramatic decarbonization is likely to prove inadequate without simultaneous action to curb climate super-pollutants like methane and nitrous oxide, both of which animal agriculture produces in significant quantities. Well-founded litigation might be uniquely positioned to facilitate such action—which likely must include reduced production and consumption of animal products—where gridlocked political processes have failed.

Litigation aimed at animal agriculture’s climate harms will not take place in a vacuum. Advocates for a more secure, sustainable, and humane food system may seek to build new coalitions based on the near-universal resonance of the climate crisis. Doing so responsibly and successfully will require paying genuine attention to other, non-climate harms. The interests of local communities, public health, animals, and the environment may inform, for example, the minimum acceptable terms of a negotiated settlement or the particular remedies sought in a lawsuit.

Litigation efforts that engage with existing social movements may dramatically reshape public discourse. In addition to empowering consumers to act with the benefit of information long obscured by the industry, greater public awareness could enable the voting public to persuade political leaders to address the profound lack of effective regulation of animal agriculture’s GHG emissions.

As climate change intensifies, public understanding grows, and this critical decade for climate action ticks on, climate litigation aimed at reducing animal agriculture emissions is poised to expand.

This Article has offered an expansive exploration of such litigation's potential in U.S. courts. Though U.S. courts will be more amenable to some theories than others, advocates may adopt an all-of-the-above approach. If legislators and executive agencies continue to fail to regulate animal agriculture emissions to any meaningful extent—let alone in a manner commensurate with global emission-reduction goals—effective climate governance may fall to these litigants and the courts before which they bring their claims.