THE HUMANE SOCIETY OF THE UNITED STATES

June 11, 2021

Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

VIA ELECTRONIC MAIL: rule-comments@sec.gov

Re: Comments on Climate Change Disclosures

The Humane Society of the United States ("HSUS"), the nation's largest animal protection organization, submits the following comments in response to the Security and Exchange Commission's ("SEC") request for public input on climate change disclosures.

I. Interests of the HSUS in Improving Climate Change Disclosures

For decades, the HSUS has helped companies across industries (e.g., food, pharmaceutical, and clothing) address animal welfare issues that impact and are impacted by their businesses. The HSUS is particularly concerned with largescale agribusiness' treatment of farmed animals at breeding and concentrated animal feeding operations ("CAFOs") and the many negative impacts of these practices. The HSUS is also highly concerned with industrialized farming's massive contribution to climate change, which negatively affects the lives of all animals.

The HSUS is a shareholder of many of the largest companies in these industries. Part of our engagement with major corporations has included using, at times extensively, shareholder advocacy processes. Most often, we have used the process to request disclosure on certain risks that companies may face as a result of animal abuse in their supply chain. Not only is the inhumane treatment of animals itself a material risk to these businesses—as a great many consumers and investors now actively seek products and services that align with their own values about animal care—the treatment of farmed animals has massive impacts on climate change, which creates even more risks for these companies and their investors.

II. Animal Agriculture is a Major Contributor to Climate Change and Environmental and Public Health Threats

Animal agribusiness represents one of the largest sources of greenhouse gas ("GHG") emissions—releasing 14.5-16.5 percent of all human-produced GHG emissions[1]—and is set to surpass the oil industry as the biggest GHG-emitter.[2] Industrialized animal agriculture is

[1] Helen Harwatt, *Including Animal to Plant Protein Shifts in Climate Change Mitigation Policy: A Proposed Three-Step Strategy*, *Climate Policy*, 19:5, 533-541 (November 2018), available https://www.tandfonline.com/doi/full/10.1080/14693062.2018.1528965.

[2] *See How Big Meat and Dairy are Heating Up the Planet*, IATP, GRAIN (July 18, 2018), https://www.iatp.org/emissions-impossible; *see also* Josh Gabbatiss, *Meat and Dairy*

a top contributor of methane—a more potent global warming agent than carbon by eighty-six times over a twenty-year timeframe.[3] Should Big Ag continue as it has, predictions are that the industry will take up 81% of the maximum allotted amount of GHG emissions under the Paris Agreement by 2050, leaving little room for other industries to function and still allow us to meet this goal.[4] This is deeply concerning, especially in the context of a United Nations study warning that air pollution related to climate change could cause millions of premature deaths by 2050.[5] A new study shows that air pollution from factory farms already leads to 17,900 US deaths per year.[6]

These impacts are directly related to how animals are raised in industrialized systems. Factory farming's intensive and cruel confinement is integrally linked with environmental, public health, and climate threats. These confinement practices include restricting breeding pigs in crates and egg-laying hens in cages, overcrowding animals indoors where they live in their own excrement on concrete floors or in urine-soaked debris, and feeding them antibiotics so they can survive in these unnatural environments. At CAFOs, animals are housed by the tens of thousands and add up to nearly 10 billion animals raised for slaughter in the US each year.[7] These animals generate billions of gallons of waste and emit millions of metric tons of GHGs. Improving their welfare would go far to abate the industries' climate change impacts.

Investors are trending toward seeking investments in companies that truly prioritize sustainability, climate, and animal welfare disclosures. However, the industry's lack of transparency and accountability perpetuates its risks, especially those related to its contribution to climate change. If continued unchecked, catastrophic outcomes, such as the loss of wildlife and habitable, crop-yielding land, will result from the industry's impact on climate. The solution will require the SEC to acknowledge this threat and create industry-specific risk disclosure standards that will help to protect investor interests. Accordingly, the HSUS is encouraged by the SEC's initiative in seeking input on climate change disclosures.

Companies to Surpass Oil Industry as World's Biggest Polluters, Report Finds, INDEPENDENT (July 18, 2018), https://tinyurl.com/y8rj78h5.

[3] *See* Scot M. Miller et al., *Anthropogenic Emissions of Methane in the United States*, 50 PROC. NAT'L ACAD. SCIS. 20018, 20018 (Dec. 10, 2013); Joseph Romm, *Climate Change: What Everybody Needs to Know* 81 (2016); Marielle Saunois, et al., *The Growing Role of Methane in Anthropogenic Climate Change*, 11 ENVTL. RES. LETTERS 120207 (2016).

[4] *Id.*

[5] *Global Environment Outlook 6* 498, UNITED NATIONS ENVIRONMENT PROGRAMME, (Mar. 4, 2019), https://tinyurl.com/y2f7s84h.

[6] Nina G. G. Domingo et al., *Air quality–related health damages of food*, PROCEEDINGS OF THE NAT'L ACAD. OF SCIENCES, Vol. 118:20 (May 2021), https://www.pnas.org/content/118/20/e2013637118.

[7] National Agric. Statistics Service, *Census of Agriculture 2017 Census*, USDA, https://www.nass.usda.gov/Publications/AgCensus/2017/Full_Report/Volume_1,_Chapter_1_US/.

III. Developing Industry-Specific Disclosure Requirements

Given the specific and extreme risks associated with industrialized animal agriculture, the SEC should develop industry-specific disclosure requirements for companies operating in this industry, heavily relying on it (e.g., food service businesses), or propping it up (e.g., animal pharmaceutical companies).

These requirements should include, at a minimum, disclosure of risks that are closely associated with the industry's practices and products. The SEC should review risk factors on an ongoing basis and seek subsequent public comment as the risks linked to an industry are in flux, like our climate. The SEC should then modify or expand the climate-risk-related topics for disclosure, as necessary.

The SEC should require companies to disclose metrics to be accompanied by a sustainability disclosure and analysis section so investors can independently evaluate the company's disclosure and analysis. This transparency will lead to greater confidence in the company's disclosures and provide the information investors need to make informed investment and voting decisions. Requiring a certification by the CEO, CFO, or other corporate officer relating to climate disclosures will also help to establish accountability and ensure accuracy. To mitigate the burden on the SEC and lessen its commitment of resources, the SEC should develop industry-specific standards only for certain industries, like animal agriculture, that are known to have the most significant GHG outputs. A less prescriptive approach could be used for industries know to have no significant impact.

For agribusiness, such risks and related disclosures should include but not be limited to:

a. Production emissions

As noted above, animal agribusiness represents one of the largest sources of GHG emissions—releasing 14.5-16.5 percent of all human-produced GHG emissions. Just one meat producing company's emissions are estimated to generate nearly half the amount of GHGs as Exxon Mobil.[8] Companies in this sector should be required to provide GHG inventories, share GHG emission targets, and report on progress toward those targets.

A company's GHG inventory disclosure should include emissions related to waste management, electricity cost and use, transportation cost and use, and oil and gas use (each in connection with feed production, animal raising, slaughter, processing, and distribution).

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[8] *See Big meat and dairy's supersized climate footprint*, GRAIN https://www.grain.org/article/entries/5825-big-meat-and-dairy-s-supersized-climate-footprint, *see also* Juliette Majot, *Big meat and big dairy's climate emissions put Exxon Mobil to shame,* THE GUARDIAN (Nov. 7, 2017) https://www.theguardian.com/commentisfree/2017/nov/07/big-meat-big-dairy-carbon-emmissions-exxon-mobil; *Emissions impossible: How big meat and dairy are heating up the planet*, IATP (July 18, 2018), https://www.iatp.org/emissions-impossible.

Plus, companies should disclose forecast emissions of any planned expansion in operations or production.

Requiring these disclosures are especially important given that there are no federal laws that regulate GHG emissions from agricultural operations—regardless of size or total annual emissions. The industry strongly resists attempts to include large factory farms in emissions reporting requirements. One such effort involves attempts to regulatorily exempt CAFOs from reporting under the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 USC § 11000 *et seq*.,—a law that would allow people to discover if they live in a community that has been contaminated by dangerous releases of regulated, very harmful gases, like hydrogen sulfide.[9]

b. Air, water, and soil pollution

CAFOs are one of the largest sources of air pollution in the country. They emit dangerous pollutants that contribute to climate change, threaten public health and safety, and harm the environment. The air near CAFOs carries many hazardous gases: methane, ammonia, hydrogen sulfide. As just noted, operators emit unhealthy amounts of these gases without reporting these releases under EPCRA, which puts surrounding communities at risk. Indeed, air pollution from factory farms already leads to 17,900 US deaths per year.[10] This is an issue receiving widespread attention, and this heightened exposure creates liability for companies in this industry, which is a threat to investors.[11]

Water quality near CAFOs and slaughterhouses is often highly contaminated as well. Synthetic nitrogen fertilizers, which are relied on to grow feed crops, leads to algal blooms, poisoned aquifers, toxic red tides, and dead zones. Slaughterhouses are a major contributor of nutrient pollution and contribute to impairments in the waterways where they discharge their pollution. E. coli-contaminated wastewater pollutes waterways near these facilities, causing fish kills and other harms.[12] Air- and water-borne chemical pollutants from these

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[9] *See Rural Empowerment Association for Community Help, et al., v. US Environmental Protection Agency, et al.*, No. 1:18CV02260 (DDC 2018).

[10] Nina G. G. Domingo et al., *Air quality–related health damages of food*, PROCEEDINGS OF THE NAT'L ACAD. OF SCIENCES, Vol. 118:20 (May 2021), https://www.pnas.org/content/118/20/e2013637118.

[11] *See* Sarah Kaplan, *Air pollution from farms leads to 17,900 U.S. deaths per year, study finds*, WASH. POST (May 10, 2021), https://www.washingtonpost.com/climate-environment/2021/05/10/farm-pollution-deaths/; Sarah Gibbens, *Meat production leads to thousands of air quality-related deaths annually*, NAT. GEO. (May 10, 2021) https://www.nationalgeographic.com/environment/article/meat-production-leads-to-thousands-of-air-quality-related-deaths-annually.

[12] Associated Press, *Tyson Farms spill spreads E. coli, kills fish in Alabama*, WHNT NEWS (June 14, 2019, 5:36 AM), https://whnt.com/2019/06/14/tyson-farms-spill-spreads-e-coli-kills-fish-in-alabama/; Complaint, *Center for Biological Diversity and Food & Water Watch v. Swift*

facilities not only cause illness in animals but also directly cause chronic respiratory illnesses, among other illnesses, in workers and surrounding communities.[13]

Pollutants from CAFOs and slaughterhouses can also leach into the soil. Livestock wastes can overload soils with macronutrients such as nitrogen (N) and phosphorous (P), and heavy metals added to feed as micronutrients.[14] Animal wastes can even cause soil arsenic pollution due to the widespread use of organoarsenic feed additives.[15] This is concerning because future climate conditions may affect how much arsenic is in soil and negatively impact crop production.[16]

Climate change will worsen the effects of the industry's air, water, and soil pollution as clean air, water, and fertile cropland will become increasingly important. The industries' various proposed solutions, such as anaerobic digesters, do not meaningfully reduce air or water pollution from the production process.[17] So long as these production methods continue, primarily the practice of concentrating large numbers of animals, waste and emissions will continue to exacerbate climate change, thus harming both people and animals.

c. Water use, scarcity, and drought

Intensive farming uses up copious natural resources, including water. On average, a single poultry slaughterhouse uses 1.2 million gallons of water per day, with some facilities exceeding 2.5 million gallons of water per day.[18] A company's average daily and total annual water usage should be disclosed.

Another major source of water usage in food animal agriculture is water used for animal feed. Growing crops to feed food animals consumes 56% of US water.[19] Droughts and floods have

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Beef Company, No. 1:19-cv-01464 (USDC Co. filed May 23, 2019), available https://www.biologicaldiversity.org/programs/environmental_health/pdfs/Slaugherhouse-Complaint.pdf.

[13] *See McKiver v. Murphy-Brown, LLC*, 980 F.3d 937, 979–80 (Wilkinson, J., concurring).

[14] JoAnn Burkholder, et al., *Impacts of Waste from Concentrated Animal Feeding Operations on Water Quality*, ENVI. HEALTH PERSPECTIVES, Vol. 115(2):308-312 (Nov. 14, 2006), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1817674/.

[15] Xueping Liu, et al., *Arsenic pollution of agricultural soils by concentrated animal feeding operations (CAFOs)*, CHEMOSPHERE Vol. 119:273-281 (Jan 2015), https://www.sciencedirect.com/science/article/pii/S0045653514008145.

[16] Muehe, E. M., Wang, T., Kerl, C.F., Planer-Friedrich, B. and S. Fendorf, *Rice production threatened by coupled stresses of climate and soil arsenic,* NATURE COMMUNICATIONS, 10: 4985 (2019) https://doi.org/10.1038/s41467-019-12946-4.

[17] *Hard To Digest: Greenwashing Manure Into Renewable Energy*, FOOD AND WATER WATCH (Nov. 2016), https://www.foodandwaterwatch.org/sites/default/files/ib_1611_manure-digesters-web.pdf.

[18] https://fbns.ncsu.edu//extension_program/documents/poultry_conserve_water.pdf.

[19] Joe Loria, *Animal Agriculture Wastes One-Third of Drinkable Water (and 8 Other Facts for*

a significant impact on feed prices and volatility. For instance, three years of drought in Texas and California caused more than $10 billion in direct agricultural losses, including increased feed costs.[20] Companies in this sector should also address water management linked to its feed production.[21]

Declining water quality is another consequence of climate change. One producer "report[ed] that it had to partially discontinue some operations in Brazil due to the lack of water access, driven by climate change impacts."[22] As early as 2025, the World Health Organization estimates that half of the world's population will be living in water-stressed areas.[23] While awareness of this issue has been growing in recent years, large-scale animal agriculture's detrimental effect on water quality and availability has been known for decades.[24] Again, companies in this industry should be required to disclose their water usage and any water use reduction targets and progress so investors can adequately assess related risks.

d. Land depletion and desertification

Land degradation reduces or eliminates a land's biological productivity, ecological integrity, or value to humans. Desertification occurs when land degrades in arid, semi-arid, and dry sub-humid areas.[25] Land-use changes and unsustainable land management are direct human causes of land degradation, with agriculture being a dominant sector driving degradation. In the US, 50% of the total land area is used for food production, with 41% of US land used to raise and feed livestock.[26]

World Water Day) (March 21, 2018), https://mercyforanimals.org/animal-agriculture-wastes-one-third-of-drinkable.

[20] *See* Jay Lund, et al., *Lessons from California's 2012-2016 Drought*, J. OF WATER RESOURCES PLANNING AND MANAGEMENT, Vol. 144(10) (Oct. 2018) DOI: http://dx.doi.org/10.1061/(ASCE)WR.1943-5452.0000984.

[21] Pensions and Investments 'Commentary: Water risks and the food sector's bottom line,' (July 2, 2019), *available at* https://www.pionline.com/industry-voices/commentary-water-risks-and-food-sectors-bottom-line.

[22] *Factory Farming: Assessing Investment Risks* 17, FARM ANIMAL INVESTMENT RISK AND RETURN (Aug. 11, 2016), https://cdn.fairr.org/2019/01/09115655/FAIRR-Factory-Farming-Assessing-Investment-Risks-2016-Report.pdf.

[23] Josie Garthwaite, *Stanford researchers explore the effects of climate change on water shortages*, STANFORD NEWS (Mar. 22, 2019), https://news.stanford.edu/2019/03/22/effects-climate-change-water-shortages/.

[24] Water For Agriculture: Facing The Limits (1989); Aidan Fortune, "Water crisis causing meat processing disruption," Global Meat News (Oct. 1, 2019), https://www.globalmeatnews.com/Article/2019/10/01/Water-crisis-causing-meat-processing-disruption.

[25] *What is Desertification*, UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION, https://www.unccd.int/frequently-asked-questions-faq.

[26] Dave Merrill and Lauren Leatherby, *Here's How America Uses Its Land,* BLOOMBERG (July 31, 2018), https://www.bloomberg.com/graphics/2018-us-land-use/.

A company's direct and indirect land-use practices, including its role in land change or conversion, and related risks and impacts should be disclosed.

e. Temperature increases

Temperature increases negatively affect livestock and feed crops. Rising global temperatures will reduce industrial animal production because heat stress significantly affects animals held in confinement facilities.[27] According to a recent study, heat stress from climate change alone already decreases US dairy production by 1.9 percent each year, resulting in $670 million in annual production losses and likely researching $2.2 billion by the end of the century.[28] The industry knows of these risks. Researchers are actually trying to genetically engineer animals so that they can withstand higher temperatures.[29]

Rising temperatures will also increase the spread of water-borne and food-borne diseases.[30]

f. Severe weather events

Extreme weather events are intensified by climate change and have proven to be disastrous for animal agriculture operations. The damage from hurricanes and severe weather events is predictable and will continue to worsen. Moreover, as attribution science improves, the link between the industries' emissions and contribution to climate change and its effect on the weather will become an increasing risk.[31]

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[27] J. Derner, et al., *Vulnerability of Grazing & Confined Livestock in the Northern Great Plains to Projected Mid-& Late-Twenty-First Century Climate*, 146 CLIMATIC CHANGE 19 (2018), available https://www.fs.usda.gov/treesearch/pubs/55014.

[28] G. Mauger, et al., *Impacts of Climate Change on Milk Production in the United States,* 67 PROFESSIONAL GEOGRAPHER 121 (2015), available https://cig.uw.edu/publications/impacts-of-climate-change-on-dairy-production/ (estimating direct losses from heat stress).

[29] University of Florida Institute of Food and Agricultural Sciences, *Scientists work to develop heat-resistant 'cow of the future,'* SCIENCE DAILY, (June 23, 2017) www.sciencedaily.com/releases/2017/06/170623100712.htm.

[30] Levy, Karen et al., *Climate Change Impacts on Waterborne Diseases: Moving Toward Designing Interventions*, CURRENT ENVIRONMENTAL HEALTH REPORTS vol. 5,2 (2018): 272-282. doi:10.1007/s40572-018-0199-7, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6119235/; Schuster-Wallace C., Dickin S., Metcalfe C. (2014) Waterborne and Foodborne Diseases, *Climate Change Impacts on Health*. In: Freedman B. (eds) *Global Environmental Change. Handbook of Global Environmental Pollution*, vol 1. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-5784-4_102.

[31] *See, e.g.*, Chelsea Harvey, *Scientists Can Now Blame Individual Natural Disasters on Climate Change*, SCIENTIFIC AMERICAN (Jan. 2, 2018) https://www.scientificamerican.com/article/scientists-can-now-blame-individual-natural-disasters-on-climate-change/; Friederike Otto, Rachel James, and Myles Allen, *The science of attributing extreme weather events and its potential contribution to assessing loss and damage*

Researchers at the National Oceanic and Atmospheric Administration have suggested that hurricanes in the Atlantic Ocean have grown considerably worse and more frequent due largely to climate change.[32] Hurricanes can disastrously damage CAFOs in the US. Hurricane Matthew, for instance, flooded waste lagoons, caused $400 million in damage to major crop fields in North Carolina, and killed 1.9 million chickens and roughly 2,800 swine.[33] In 1999, Hurricane Floyd caused about 21,500 swine deaths and the flooding and breach of several pig waste lagoons.[34] These climate-enhanced weather events are costing billions in losses.[35] The Midwest experienced similar losses from severe flooding, with early estimates of lost crops and livestock approaching $1 billion in Nebraska alone.[36] Such risks should be disclosed.

g. Deforestation

Largescale animal agriculture takes up a massive amount of land, leading to the cutting down and destruction of the planet's forests. The Amazon is often referred to as the planet's lungs, producing 20% of the oxygen in the earth's atmosphere and also is a huge carbon sink that acts to cool global temperature.[37] The amount of carbon the Amazon is absorbing from the atmosphere has fallen by almost a third in the last decade, which amounts to one billion tons of carbon dioxide emissions.[38]

associated with climate change impacts, Environmental Change Institute, School of Geography and the Environment, University of Oxford, https://unfccc.int/files/adaptation/workstreams/loss_and_damage/application/pdf/attributingextremeevents.pdf.

[32] Kieran T. Bhatia et al., *Recent Increases in Tropical Cyclone Intensification Rates*, NATURE (Feb. 7, 2019), *available* https://www.nature.com/articles/s41467-019-08471-z.

[33] Ryan McCrimmon, *Farmers Brace for Hurricane Florence*, POLITICO (Sept. 12, 2018), https://tinyurl.com/y5hv7ckl.

[34] *Id.*

[35] *See Carolinas Farms Could Take Billions in Losses From Florence*, WWAY TV3 (Sept. 22, 2018), https://www.wwaytv3.com/2018/09/22/carolinas-farms-could-take-billions-in-losses-from-florence/.

[36] Humeyra Pamuk et al., *U.S. Farmers Face Devastation Following Midwest Floods*, REUTERS (Mar. 20, 2019), https://tinyurl.com/y4nyqd2c.

[37] *Id.*

[38] Robert McSweeney, *Amazon rainforest is taking up a third less carbon than a decade ago*, CARBON BRIEF (Mar. 18, 2015), https://www.carbonbrief.org/amazon-rainforest-is-taking-up-a-third-less-carbon-than-a-decade-ago.

Cattle ranching is "the largest driver of deforestation in every Amazon country, accounting for 80% of current deforestation rates."[39] More than three-quarters of this deforestation results from cattle ranching, animal feed crops, or soy production.[40] Unless stopped, deforestation could turn much of the remaining Amazon forests into a degraded type of desert and could release more than 50 billion tons of carbon into the atmosphere within the next 30 to 50 years. Indeed, scientists are already studying whether the Amazon has turned from friend to foe by releasing more carbon than absorbing.[41]

Companies should disclose sourcing, infrastructure, investments, and other connections that use or rely on deforested lands.

h. *Biodiversity loss and habitat destruction*

The production of food is the primary cause of biodiversity loss globally.[42] An average of around 25 percent of species in assessed animal and plant groups are threatened, suggesting that around 1 million species already face extinction, many within decades unless action is taken to reduce the intensity of drivers of biodiversity loss.[43] Extinction enhancing climate change leads to a vicious cycle wherein the climate effects of industrialized farming will increase the extinction rate that will accelerate climate change that will in turn harm agriculture by way of crop loss and water shortages.

This biodiversity loss is driven by the conversion of land for agriculture as the intensification of agriculture reduces the quality and quantity of habitat available.[44] Companies' animal welfare policies and practices and their sustainability policies and practices—including those

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[39] Nepstad et al., *Interactions among Amazon Land Use, Forests and Climate: Prospects for a Near-Term Forest Tipping Point,* PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B BIOLOGICAL SCIENCES 363(1498):1737-46 (June 2008), *available at* https://www.researchgate.net/publication/5584065_Interactions_among_Amazon_Land_Use_Forests_and_Climate_Prospects_for_a_Near-Term_Forest_Tipping_Point.

[40] Terrence McCoy, *The Amazon is Burning*, WASH. POST (Aug. 22, 2019), https://www.washingtonpost.com/graphics/2019/world/amp-stories/amazon-fires-causes-rainforest-climate-change/; *see also Amazon wildfires illustrate dangers of deforestation for meat production*, HSUS (Aug. 27, 2019), https://blog.humanesociety.org/2019/08/amazon-wildfires-illustrate-dangers-of-deforestation-for-meat-production.html.

[41] Nancy L. Harris, et al, *Global maps of twenty-first century forest carbon fluxes*, https://tinyurl.com/2vr2wfzs

[42] Tim G. Benton, *Food system impacts on biodiversity loss,* ENERGY, ENVIRONMENT AND RESOURCES PROGRAMME (Feb. 2021), https://www.chathamhouse.org/sites/default/files/2021-02/2021-02-03-food-system-biodiversity-loss-benton-et-al_0.pdf.

[43] IPBES, *The global assessment report on biodiversity and ecosystem services* (2019), *available at* https://ipbes.net/sites/default/files/2020-02/ipbes_global_assessment_report_summary_for_policymakers_en.pdf.

[44] *Id.*

related to the production of farmed animals and the production of other commodities, such as palm oil, can result in significant habitat destruction for vulnerable species and enhance adverse effects on climate.[45]

A changing climate will impact wildlife in numerous ways, including but not limited to, reducing suitable habitat for some species as weather patterns change,[46] destroying habitat by rising seas or wildfires, impacting marine animals by warming oceans, and by the spread of the increased ability of parasites and pathogens that could kill animals directly or destroy key food sources.[47] Moreover, habitat destruction could also promote the emergence of new infectious zoonoses.[48]

The material risks stemming from a company's practices that contribute to land conversion or habitat destruction and the related harmful effects of those practices should be disclosed.

i. Public health and biosecurity risks

Largescale pork operations are a serious threat to public health. The problems associated with them, including the spread of antibiotic-resistant bacteria and lethal viruses, carry global economic and health consequences. Risk of disease, pandemics, increased mortality, and antibiotic resistance are all closely linked to industrialized agricultural practices. Climate change enhances these risks as rising temperatures increase the spread of water-borne and food-borne diseases.

i. Antibiotic resistance

The United Nations recognizes antibiotic resistance as a "most urgent global risk,"[49] and it is "widely considered to be the next global pandemic."[50] By volume, 80% of antibiotics sold

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[45] *See, e.g.*, Meijaard, E. et al., *Oil palm and biodiversity. A situation analysis by the IUCN Oil Palm Task Force*, IUCN Oil Palm Task Force Gland, Switzerland: IUCN (2018), available https://portals.iucn.org/library/sites/library/files/documents/2018-027-En.pdf; *Special Report on Climate Change and Land*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Aug. 2019), available https://www.ipcc.ch/report/srccl/.

[46] *See, e.g., Global Environment Outlook 6* 498, UNITED NATIONS ENVIRONMENT PROGRAMME, (Mar. 4, 2019), https://tinyurl.com/y2f7s84h.

[47] Jonathan Lovvorn, *Climate Change Beyond Environmentalism Part I: Intersectional Threats and the Case for Collective Action*, 29 Geo. Envtl. L. Rev. 1, 40-47 (2017), *available at* https://gielr.files.wordpress.com/2017/04/zsk00117000001.pdf.

[48] Medical News Today, *Excessive animal farming created 'perfect storm' for pandemics, scientist says, available at:* https://www.medicalnewstoday.com/articles/excessive-animal-farming-created-perfect-storm-for-pandemics-scientist-says (May 10, 2021).

[49] *Press Release: High-Level Meeting on Antimicrobial Resistance*, GEN. ASSEMBLY OF THE UNITED NATIONS (Sept. 21, 2016), *available* https://tinyurl.com/y5upsqxv.

[50] M.L. Nadimpalli, et al., *Antibiotic resistance: a call to action to prevent the next epidemic of inequality*, NAT MED 27, 187–188 (January 18, 2021),

in the US are not consumed by people but instead are pumped into cows, pigs, and chickens raised for human consumption.[51]

The Center for Disease Control and Prevention ("CDC") estimates that bacteria from food and farm animals cause one in five resistant infections.[52] Common, life-threatening infections like pneumonia, gonorrhea, HIV, TB, and malaria are increasingly untreatable because of antibiotic-resistant bacteria.[53]

Antibiotic resistance is not merely a looming concern; "it is a very present reality – in all parts of the world . . . on farms and in communities."[54] However, the crisis did not erupt overnight; decades of haphazard antibiotic use and overuse in farm animals is a leading contributor to this global emergency.[55] Continuous, herd-wide use of antibiotics to raise animals leads to the development and spread of antibiotic-resistant bacteria.[56] Companies must disclose their antibiotic use, governance practices, and associated risks.

As evidenced by recent and significant media attention on unwise antibiotic use in farm animals, investors are increasingly aware that antibiotic resistance is a growing existential threat and is a major concern to their investments. As Dr. Haileyesus Getahun, director of the U.N. Interagency Coordination Group on Antimicrobial Resistance, explained to the New York Times in 2019, "[t]his is a silent tsunami…[w]e are not seeing the political momentum we've seen in other public health emergencies, but if we don't act now, antimicrobial resistance will have a disastrous impact within a generation."[57] Investors cannot make

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https://www.nature.com/articles/s41591-020-01201-9.

[51] Giorgia Guglielmi, *Are antibiotics turning livestock into superbug factories?,* SCIENCE, (September 28, 2017), http://www.sciencemag.org/news/2017/09/are-antibiotics-turning-livestock-superbug-factories.

[52] CDC, *Antibiotic Resistance, Food, and Food-Producing Animals*, (November 8, 2019), https://www.cdc.gov/features/antibiotic-resistance-food/.

[53] *Id.*

[54] United Nations, *At UN, global leaders commit to act on antimicrobial resistance*, UN NEWS (September 21, 2016), available at https://news.un.org/en/story/2016/09/539912-un-global-leaders-commit-act-antimicrobial-resistance.

[55] *See, e.g.*, Timothy F. Landers, et al., *A Review of Antibiotic Use in Food Animals: Perspective, Policy, and Potential*, Pub. Health Rep. 127(1): 4–22 (2012), available at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3234384/.

[56] *See, e.g.*, Jim O'Neill et al., *Tackling Drug-Resistant Infections Globally: Final Report and Recommendations*, THE REVIEW ON ANTIMICROBIAL RESISTANCE 1, 24 (2016), *available at* https://amr-review.org/sites/default/files/160518_Final%20paper_with%20cover.pdf.

[57] Andrew Jacobs, *U.N. Issues Urgent Warning on the Growing Peril of Drug-Resistant Infections*, NY TIMES (April 29, 2019) https://www.nytimes.com/2019/04/29/health/un-drug-resistance-antibiotics.html (reporting on a study showing the overuse of antimicrobial drugs in humans, animals, and plants is fueling resistant pathogens that could kill 10 million people annually by 2050.)

responsible and sustainable investment decisions without accurate and meaningful disclosures about this impending disaster.

ii. Pandemic risk

The spread of deadly zoonotic viruses is also on the rise. The United Nations recently pointed out that the worldwide growth in industrialized farming of animals means there have never before been as many opportunities for pathogens to pass through animals and the environment to affect humans.[58] As experience with COVID-19 has shown, viruses can jump between animal species, and to humans rapidly and create a global public health disaster.[59] CAFOs present a nearly perfect breeding ground for viral diseases. In 2009, an H1N1 swine-origin flu pandemic sickened 60.8 million Americans, hospitalized 274,304, and killed 12,469, including more than a thousand children, as estimated by the Centers for Disease Control and Prevention.[60] Influenza strains can rapidly spread continent-wide thanks to long-distance pig transport.[61] Recently, USDA confiscated 1 million pounds of pork products smuggled in from China, "where there is an outbreak of African swine fever[,] the highly contagious and deadly disease [that] affects both domestic and feral (wild) pigs and there is no treatment or vaccine available for it."[62]

These and other recent events raise alarms for investors as they can lead to supply chain issues and other major liabilities.[63]

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[58] United Nations Environment Programme, *UNEP Frontiers 2016 Report, Emerging Issues of Environmental Concern* 18 (2016), https://environmentlive.unep.org/media/docs/assessments/UNEP_Frontiers_2016_report_emerging_issues_of_environmental_concern.pdf.

[59] Sarah Goldman, et al., *Essential and in Crisis: A Review of the Public Health Threats Facing Farmworkers in the US*, Johns Hopkins Center for a Livable Future (May 4, 2021), https://clf.jhsph.edu/publications/essential-and-crisis-review-public-health-threats-facing-farmworkers-us.

[60] Sundar S. Shrestha et al., *Estimating the burden of 2009 pandemic influenza A (H1N1) in the United States (April 2009-April 2010)*, 52 CLIN. INFEC. DIS. S75-82 (2011); Trifonov et al., *The Origin of the Recent Swine Influenza A(H1N1) Virus Infecting Humans*, 14 EURO SURVEILL. (2009), *available* http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19193.

[61] *See* Smith et al., *Origins and evolutionary genomics of the 2009 swine-origin H1N1 influenza A epidemic,* 459 NATURE 1122 (2009), https://www.nature.com/articles/nature08182.pdf; Bernice Wuethrich, *Chasing the Fickle Swine Flu*, 299 SCIENCE 1502 (2003), *available* http://science.sciencemag.org/content/299/5612/1502.full.

[62] *USDA Continues to Prevent African Swine Fever from Entering the U.S.: Provides New Resources to Raise Awareness of the Deadly Disease,* USDA APHIS (Mar. 3, 2019), https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/237c928.

[63] *See* James Gorman, *A New Bird Flu Jumps to Humans. So Far, It's Not a Problem*, NY Times (Apr. 26, 2021), https://www.nytimes.com/2021/04/21/science/bird-flu-pandemic.html;

iii. Increased mortality and risk of disease

The air pollution caused by large animal operations is known to cause headaches, breathing problems, and heart conditions for surrounding community members.[64] Those who live near or work in these operations are observed to have a lower life expectancy. The threat of disease along with other associated harms contribute to low life expectancy in communities near CAFOs.[65] As climate change imperils human health even more, the health problems associated with industrialized agricultural practices will be an increasing liability of concern to investors.

j. Worker safety issues

As climate change is known to increase pandemic risk and disease spread, workers in the animal agribusiness industry are increasingly put in danger. COVID-19 exposed major vulnerabilities in the US's consolidated food production system forcing the closure of numerous slaughterhouses. Coronavirus outbreaks at meatpacking plants nationwide killed more than 280 employees. Slaughterhouse workers have always had one of the most dangerous jobs with high rates of injury, dismemberment, and death—and the current crisis has exacerbated the dangers of these jobs.

Industrialized animal agriculture, which makes outbreaks similar to COVID-19 more likely, also threatens the lives of these workers with the possibility of reliving an outbreak similar to COVID-19, if not worse. Climate change will increase the risks to workers even more because many of the root causes of climate change, like deforestation, habitat loss, and warming temperatures, also increase the risk of pandemics.[66] Such vulnerabilities in the supply chain and worker safety risks should be disclosed.

Fatima Hussein, *Pilgrim's Pride Blamed for Spouses' Death by Covid-19 in Lawsuit,* BLOOMBERG LAW (Apr. 21, 2021), https://news.bloomberglaw.com/safety/pilgrims-pride-blamed-for-spouses-death-by-covid-19-in-lawsuit.

[64] M. Greger, *The Public Health Impacts of Concentrated Animal Feeding Operations on Local Communities* (2010), https://www.humanesociety.org/sites/default/files/docs/public-impacts-factory-farms-on-communities.pdf

[65] Julia Kravchenko, MD, PhD. et al., *Mortality and Health Outcomes in North Carolina Communities Located in Close Proximity to Hog Concentrated Animal Feeding Operations* 79 N.C. MED. J. (2018), *available at* www.ncmedicaljournal.com/content/79/5/278.full.

[66] *See Coronavirus, Climate Change, and the Environment A Conversation on COVID-19 with Dr. Aaron Bernstein, Director of Harvard Chan C-CHANGE,* https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-climate-change/; Abrahm Lustgarten, *How Climate Change Is Contributing to Skyrocketing Rates of Infectious Disease*, PROPUBLICA (May 7, 2020), https://www.propublica.org/article/climate-infectious-diseases; Jeff Goodell, *How Climate Change Is Ushering in a New Pandemic Era*, ROLLING STONE (Dec. 7, 2020) https://www.rollingstone.com/culture/culture-features/climate-change-risks-infectious-diseases-covid-19-ebola-dengue-1098923/.

k. Environmental justice impacts

The disclosure should include an environmental justice analysis and disclosure of associated risks. Climate change disproportionately impacts marginalized and vulnerable populations.[67] The correlation between race, income, and exposure to hazardous waste disposal is well documented. CAFOs are typically located in disenfranchised communities that have limited access to healthcare and, due to community members' close proximity to waste disposal sites and the contamination caused thereby, the disenfranchised are likely to bear the brunt of the harm stemming from largescale animal agriculture. As recently noted by Judge Wilkinson of the Fourth Circuit, these "harms are well-established, almost to the point of judicial notice, to be visited disproportionately upon the dispossessed—[especially] on minority populations and poor communities."[68] Research has shown that the waste, pathogens, heavy metals, and odor produced by CAFOs contribute to excessive respiratory and digestive ailments, mood disorders, impaired mental health, and decreased life expectancy and quality of life for the low-income community members living nearby such operations. These adverse health impacts are only exacerbated as climate change worsens.

Concerns about environmental and social justice are on the rise. A recent Executive Order commits the current Administration to place environmental justice at the center of climate policy.[69] Addressing the impacts of animal agriculture that disproportionately affect communities of color must be a part of that commitment. Animal agribusiness' direct and indirect harms that disproportionally impact communities of color will continue to be an increasing liability. Such liabilities should be disclosed so investors can make informed investment decisions.

l. Description of governance and oversight of climate-related risks

Since most large animal agribusinesses are vertically integrated, governance disclosures should encompass how the company will evaluate and oversee risk among all aspects of its supply chain, including the contract and independent farmers it sources from. This disclosure should also include how the company plans to respond to supply chain disruptions brought on by severe weather events, pandemics, cyber-attacks[70], feed shortages, fuel shortages, and other climate-related disruptions.

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[67] Renee Cho, *Why Climate Change is an Environmental Justice Issue*, Columbia Climate School (Sept. 22, 2020), https://news.climate.columbia.edu/2020/09/22/climate-change-environmental-justice/.

[68] *McKiver v. Murphy-Brown, LLC*, 980 F.3d at 982 (4th Cir. 2020) (Wilkinson, J., concurring).

[69] Exec. Order on Tackling the Climate Crisis at Home and Abroad (Jan. 27, 2021), https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/.

[70] Hamza Shaban, *Hackers hit JBS, the world's largest meat processor*, WASH. POST (June 1, 2021), https://www.washingtonpost.com/business/2021/06/01/jbs-cyberattack-meat-supply-chain/.

m. Description of legal and regulatory liabilities

Because of the harms generated from CAFOs, largescale animal operations are at risk of tort actions (e.g., nuisance, trespass, negligence, unjust enrichment, wrongful death, etc.),[71] environmental and animal handling violations or noncompliance[72], and false or deceptive advertising claims especially relating to their sustainability advertisements.[73] Disclosures should include a report on any such current actions and an analysis of the risk of such future actions.

n. Economic impacts, shifted risk, and taxpayer burden

Taxpayers increasingly shoulder the costs of the agricultural sector's climate-associated risks. [74] Companies should disclose the subsidies they use or benefit from. While courts have found that where a risk is insured or will be reimbursed, that risk need not be disclosed because there would be no financial harm to the investor, these benefits and subsidies may not always be available to this industry, and investors should know to what amount a company relies on such support in order to assess risk.[75]

o. Animal confinement and breeding practices

As giving animals more space in which to engage in species-specific activities and treating them more humanely leads to a reduction in pollutants and emissions, a company's confinement practices should be disclosed.

The intensive confinement practices and overcrowded conditions commonplace in large animal breeding and feeding operations frustrate, distress, and cause suffering to animals.

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[71] *See, e.g., McKiver v. Murphy-Brown, LLC*, 980 F.3d 937 (4th Cir. 2020); *Barden, et al., v. Murphy-Brown, et al.*, 7:20-cv-00085 (EDNC, 2020).

[72] *See, e.g., Three Quarters of Large U.S. Slaughterhouses Violate Water Pollution Permits*, Environmental Integrity Project (Oct. 11, 2018), http://www.environmentalintegrity.org/news/slaughterhouses-violate-water-pollution-permits/; *see also Quarterly Enforcement Reports*, FSIS, https://www.fsis.usda.gov/inspection/regulatory-enforcement/quarterly-enforcement-reports.

[73] *See, e.g., Organic Consumers Assoc. v. Tyson Foods, Inc.,* No. 2019-CA-004547-B (D.C. Super. 2019) (claiming chicken producer was deceptive in their marketing by claiming their chicken products are produced in an environmentally responsible way when it was not the case); *see also The City of New York v. Exxon Mobil Corp.,* No. 451071/*2021* (NY Sup. Ct. 2021) (alleging oil companies misleadingly greenwash their corporate brands by exaggerating their investments in clean energy resources and by inflating the climate benefits of their natural gas products).

[74] Dan Charles, *As Climate Changes, Taxpayers Will Shoulder Larger U.S. Payouts To Farmers*, NPR (July 24, 2019), www.npr.org/sections/thesalt/2019/07/24/744541143/as-climate-changes-taxpayers-will-shoulder-larger-u-s-payouts-to-farmers.

[75] *See Levine v. NL Indus., Inc.*, 926 F.2d 199, 204 (2d Cir. 1991).

Many animals even die due to complications from their over-crowded environment. Extensive scientific evidence shows that intensively confined farmed animals suffer because they cannot exercise, fully extend their limbs, or engage in many important natural behaviors.[76] A federal advisory board noted, and commonsense tells us, that good animal welfare requires that animals be able to perform species-specific behaviors. Since intensive confinement interferes with natural behaviors, it is detrimental to the animals' well-being.[77]

It is also detrimental to their immune systems. Concentrating tens of thousands of farmed animals in warehouse-like facilities creates a breeding ground for disease, pollutes the environment with the generation of millions of gallons of waste, and contributes to climate change through massive GHG emissions.

The industrialized confinement and breeding practices used to produce these animals are strongly indicative of each of the above risk factors and should be disclosed. Such practices include:

i. Use of gestation or farrowing crate[redacted] crates and for what duration)
ii. Use of battery cages (e.g., number of birds per cage and for what duration)
iii. Use of veal crates
iv. Number of animals per unit of measure (e.g., square foot)
v. Number of animals per housing facility
vi. Outdoor access (to what extent and for how long are animals able to meaningfully access the outdoors)
vii. Enrichment availability (animals able to engage in species-specific enrichment activities are generally stronger and healthier)
viii. Veterinarian treatment
ix. Genetic engineering (selectively breeding animals to grow unnaturally big in a shorter time is inherently cruel and results in health problems that weaken immunities and therefore increase the chance of disease leading to premature death and resultant waste, pollution, and emissions)

Companies should also be required to disclose whether any of the above practices in use are banned or restricted by law in any jurisdiction. For instance, several states have banned or

[76] *An HSUS Report: The Welfare of Intensively Confined Animals in Battery Cages, Gestation Crates, and Veal Crates*, HSUS (July 2012), https://www.humanesociety.org/sites/default/files/docs/hsus-report-animal-welfare-of-intensively-confined-animals.pdf.
[77] *National Organic Standards Board Livestock Committee Animal Welfare Discussion Document Stocking Density*, AMS (Sept. 9, 2010), https://www.ams.usda.gov/sites/default/files/media/LSDDStockingRatesOct2010.pdf.

restricted the use of veal crates (Arizona, California, Colorado, Kentucky, Maine, Massachusetts, Michigan, Ohio, and Rhode Island).[78]

Each company should disclose these practices across its entire supply chain regardless of whether the practices are employed by the company or used by contract or independent farmers from which the company supplies.

p. Livestock production totals

Animals produce a lot of waste and require a lot of resources. The more animals produced, the greater their impact. For example, just one 14,000 head pig operation produces over 150,000 pounds of waste each day.[79] The following disclosure would illuminate for investors a company's climate and environmental impact:

i. Number of breeding animals by species
ii. Number of animals raised by species
iii. Number of animals euthanized
iv. Number of animals transported to finishing facilities
v. Number of animals transported to slaughter facilities
vi. Number of animals dead-on-arrival (at both finishing and slaughter facilities)
vii. Number of animals euthanized by species
viii. Number of animals depopulated by species
ix. Number of animals slaughtered by species

These numbers should be reported by each company across its entire supply chain regardless of whether the animals are company-owned, outsourced to contractors, or independently owned.

IV. Industry-Led or Third-Party Disclosure Standards Should Not Be Used

Leaving it up to individual companies or industries to develop disclosure standards will lead to under-disclosure and failure to address serious issues. Time and time again, companies in agribusiness have failed to disclose material information related to their GHG footprint, environmental pollution, and inhumane treatment of animals. When it comes to climate disclosures, animal agribusinesses have fallen short. Companies commonly use boilerplate language or only disclose what the company sees as positive steps to reduce its impact but fail to acknowledge the very real risks associated with its unsustainable practices.[80]

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[78] *Higher Welfare For Veal Calves*, Compassion in World Farming, https://www.ciwf.com/farmed-animals/cows/vealcalves/higher-welfare/ (last visited June 1, 2021).

[79] *McKiver v. Murphy-Brown, LLC*, 980 F.3d at 947, 979 (Wilkinson, J., concurring).

[80] *See* Robyn Bishop, *Investing in the Future: Why the SEC Should Require a Uniform Climate Change Disclosure Framework to Protect Investors and Mitigate U.S. Financial Instability*, 48 ENVIRONMENTAL LAW 491, 501 (2018), available https://law.lclark.edu/live/files/26719-48-3bishop ("under the current system, the companies that do address climate change do so with

For example, Pilgrim's Pride, the nation's second-largest poultry producer, only mentions climate change twice in its latest 10-K form. The first in the context of discussing changes in consumer preferences noting "consumer concerns related to human health, climate change, resource conservation and animal welfare of animal-based protein sources have driven consumer interest in plant-based protein sources." Keen investors might read between the lines and realize that this language glosses over the fact that the company's key products, chicken and pork, generate human health, climate change, an animal welfare risks, unlike plant-based products, but this disclosure does not make that clear. Pilgrim's Pride then reports climate change as a "general risk factor" noting "climate change, including the impact of global warming, has resulted in risks that include changes in weather conditions, extreme weather events and adverse impacts on agricultural production, as well as potential regulatory compliance risks, all of which could have a material adverse effect on our results of operations, financial condition and liquidity."[81] This is the same boilerplate language used in the previous year.[82]

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varied attention to detail. … [M]any companies that do have significant exposure to climate change, like oil and gas companies, currently include a boilerplate disclosure recognizing climate change as a risk, but say nothing about its impacts on a particular business. Most boilerplate disclosures include generic statements about how greenhouse gas emissions can "reduce demand for fossil energy derived products" and "increase the demand for less carbon-intensive energy sources" without making any specific reference to how those statements might affect the company itself or the value of its assets") (citing Katie Wagner, *Companies' Climate Change Disclosure Could Be Better*, Agenda Wk. (Sept. 24, 2012), https://perma.cc/CDY9-TE8T); *see also id.* at 510 ("[A] 2014 [study] found . . . , of the approximately 70% [of companies that said they face climate risk], only 15% used metrics, and approximately 40% used boilerplate language[,] [showing] companies need guidance in this area. The SEC discourages boilerplate language, and many companies remain unsure about what information to include, if they are subject to any risk at all, or simply do not wish to disclose climate risk at all.") (citing Disclosures, Phase I Report of the Task Force on Climate-Related Financial Disclosures 17 (2016), https://perma.cc/X27G-Y6ZA; SEC Concept Release No. 33-10064, 34-77599, S7-06-16 at 21 (Apr. 13, 2016), https://perma.cc/H624-X5QM; Sustainability Accounting Standards Bd., Business and Financial Disclosure Required by Regulation S-K – The SEC's Concept Release and Its Implications 1, 4, 13, https://perma.cc/AE5E-7LMQ; Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 6,290, 6,296 (Feb. 8, 2010) (to be codified at 17 C.F.R. pts. 211, 231 & 241)); *see generally* Anne Beatty et al., *Sometimes Less is More: Evidence from Financial Constraints Risk Factor Disclosures (*Mar. 2015), available at http://papers.ssrn.com/sol3/papers.cfm?abstractid=2186589 (arguing that as litigation risk increased during and after the 2008 financial crisis, registrants were more likely to disclose immaterial risks, resulting in a deterioration of disclosure quality).

[81] Pilgrim's Pride, 10-K at 16 (Feb. 10, 2021), https://www.sec.gov/ix?doc=/Archives/edgar/data/0000802481/000080248121000015/ppc-20201227.htm.

[82] Pilgrim's Pride, 10-K at 13 (Feb. 20, 2020),

Some companies fail to mention climate change at all as a risk factor. For instance, Hormel Foods, a leading pork producer, neglects to acknowledge climate change as a substantial risk in its 10-K even though it raises issues of climate fluctuation supply chain disruptions and effects of pandemic and disease outbreaks, all of which are made more severe and likely due to climate change.[83]

Clearly, the industry needs clear and specific guidance. However, being overly prescriptive may lead to the same deficiencies in disclosures preceding the 2010 guidance. Previously, in 2010, the SEC issued guidance to registrants on how to evaluate climate change risks when considering what information to disclose to investors under Regulation S–K.[84] To date, however, most companies have responded by adopting boilerplate disclosure forms that merely track bare formulaic requirements without providing specificity relating to how climate risks affect their businesses in particular.[85] In developing industry-specific standards, the SEC should be careful to make clear that any prescribed list is non-exhaustive and supplement any list with an expansive principles-based framework that will direct companies to disclose any other material climate-related risks.

The SEC should borrow from existing standards frameworks but not rely on them exclusively. Most third-party standards boards rely on voluntary reporting from individual companies. The analysis of how a company stands up to these independent standards is thus limited to the curated information provided to the boards by the businesses. As such, significant bias, underreporting, and nonreporting of significant data could lead to false conclusions. As there is no criminal liability attached to this reporting, incomplete or falsified disclosures may be more prevalent. These "independent" boards can themselves lead to greenwashing by conveying to investors that a company is more sustainable than it really is.

Relying on independent standards or review boards is also highly problematic because it is increasingly difficult to track financial ties, diminishing their credibility. Moreover, without express and clear standards from a trusted governmental body, numerous third-party standards boards could adopt different metrics resulting in multiple analyses and confusion among investors. While third-party standards boards appear to have valuable models that the SEC could look to, the SEC should not rely on these boards to implement or enforce disclosures.

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https://www.sec.gov/ix?doc=/Archives/edgar/data/0000802481/000080248120000009/ppc-2019x12x29x10k.htm (using the same generic language)

[83] Hormel, 10-K at 8 (Dec. 6, 2019), https://www.sec.gov/ix?doc=/Archives/edgar/data/0000048465/000004846519000057/hormel201910k.htm.

[84] *See Commission Guidance Regarding Disclosure Related to Climate Change*, Release No. 33–9106 (Feb. 8, 2010) [75 FR 6290 (Feb. 8, 2010)].

[85] *See supra* n. 80.

V. SEC Should Oversee and Investigate Investment Adviser Funds' ESG Claims

Investment adviser funds must be monitored to ensure the funds are conforming with the ESG principles they promote. Promoting funds as sustainable appears to be a growing trend. Large firms, including BlackRock Inc. and Vanguard Group Inc., with a combined $14 trillion in assets, have announced specific ESG funds or integrating sustainability into their investment strategies.[86]

However, many of these firms are acting inapposite to their stated commitments. For instance, while fund managers may be divesting from fossil fuels, many are still investing in highly unsustainable industries, like industrialized animal agriculture.[87] Moreover, some of these funds are using their voting power to vote against ESG proposals. Proxy voting records reveal that Vanguard and Blackrock were among the least supportive of such resolutions, voting in favor of just 11% and 15% of climate resolutions in 2020.[88]

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[86] *See, e.g., Our 2020 Sustainability Actions*, BlackRock, https://www.blackrock.com/corporate/literature/publication/our-2020-sustainability-actions.pdf; *ESG Investing*, Vanguard, https://investor.vanguard.com/investing/esg/.

[87] For instance, Vanguard's "ESG U.S. Stock" portfolio includes holdings in US Foods Holding Corp., a large foodservice distributor in the United States, Costco Wholesale Corp., a company now famous for its unsustainable $4.99 rotisserie chicken (*see* Nicholas Kristof, *The Ugly Secrets Behind the Costco Chicken,* NY TIMES (Feb. 6, 2021), https://www.nytimes.com/2021/02/06/opinion/sunday/costco-chicken-animal-welfare.html), large animal producers like Hormel Foods Corp. and Tyson Foods, Inc., and several large restaurant chains like Dine Brands Global, Inc. (owners of IHOP), The Cheesecake Factory, Chipotle, Dominos, Cracker Barrell, and McDonalds—all of which rely on a supply chain rooted in largescale animal agriculture. This supposedly sustainable portfolio also includes the largest animal drug companies in the world: Elanco Animal Health, Inc., Eli Lilly & Co., Zoetis, Merck, and Pfizer. *See Vanguard ESG U.S. Stock ET*, Vanguard, https://investor.vanguard.com/etf/profile/overview/ESGV/portfolio-holdings (as of June 11, 2021). These companies are the makers of such beta-antagonists commonly uses as animal growth promotors like Ractopamine (a drug banned or restricted in over 160 countries) and many of the antibiotics Tylosin, Lincomycin, and Chlortetracycline that are fed to animals at massive amounts risking the development of antibiotic resistance. Even with BlackRock's ESG integration investment strategy, its portfolios include similar industry holdings, not the least of which is JBS SA, the world's largest meat producer. *See* Robert Mackey, *How Larry Fink, Joe Biden's Wall Street Ally, Profits From Amazon Cattle Ranching, a Force Behind Deforestation,* THE INTERCEPT https://theintercept.com/2019/08/30/amazon-rainforest-fire-blackrock-jbs/.

[88] *Proxy voting records challenge asset managers' responsible investment claims,* SHARE ACTION (Dec. 1, 2020) https://shareaction.org/proxy-voting-records-challenge-asset-managers-responsible-investment-claims/.

The SEC should oversee and investigate fund advisers to ensure each fund's ESG claims comport with their investment and proxy voting actions. Investors need to be protected from advisers that might exploit the increasing desire to invest in climate-friendly and sustainable businesses. These are areas of concern the SEC has recognized as an ESG risk in a recent alert noting that "[f]irms claiming to be conducting ESG investing need to explain to investors what they mean by ESG and they need to do what they say they are doing."[89]

VI. Conclusion

The HSUS, on behalf of itself as an organization and on behalf of its members, has a strong interest in the SEC adopting effective regulations to ensure that businesses effectively disclose to investors how their business activities' impacts on animals, the environment, and climate materially affects, or materially risks, affecting their businesses economically.[90] It is

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[89] Commissioner Hester M. Peirce, *Statement on the Staff ESG Risk Alert*, SEC (Apr. 2021), https://www.sec.gov/news/public-statement/peirce-statement-staff-esg-risk-alert.

[90] For support for the proposition that "business activities' impacts on animals materially affects or materially risks affecting their businesses economically" in ways reasonable investors would find material, *see, e.g.*, Anthony Fletcher, *Pilgrim's Pride Pays Price for Poultry Plant Scandal*, FOOD QUALITY NEWS (Jul. 19, 2008, 14:44 GMT), https://www.foodnavigator.com/Article/2004/07/27/Pilgrim-s-Pride-pays-price-for-poultry-plant-scandal (detailing the response to the release of an investigation illuminating animal abuses by Pilgrim's Pride which resulted in the company's share prices falling by 10.4%); *Factory Farming: Assessing Investment Risks: 2016 Report* 3, FARM ANIMAL INVESTMENT RISK AND RETURN, *available* http://www.fairr.org/wp-content/uploads/FAIRRReportFactoryFarmingAssessingInvestmentRisks.pdf (noting the "most obvious" risks (among many) are "the short-term risks such as the threat of a reputational or regulatory backlash against any investee company involved in factory farming and shown to have poor ESG [(environmental, social and governance)] (including animal welfare) standards."); Glynn T. Tonsor and Nicole J. Olynyk, *U.S. Meat Demand: The Influence of Animal Welfare Media Coverage*, KANSAS STATE UNIVERSITY (Sept. 2010, 2), http://www.mercyforanimals.org/files/Kansas_State_Media.pdf (detailing a 2010 Purdue and Kansas State University study examining grocery store sales of beef, pork, and poultry before and after extensive news coverage of an animal welfare scandal, and concluding, "[a]s a whole, media attention to animal welfare has significant, negative effects on U.S. meat demand"); Glynn T. Tonsor, "Impacts of Animal Well-Being & Welfare Media Coverage on Meat Demand" (PowerPoint presentation, AMI Animal Care & Handling Conference, Kansas City, Missouri, Oct. 19, 2011), https://www.agmanager.info/sites/default/files/AMIAnimalCareHandling10-19-11.pdf (reviewing data and research to conclude animal welfare impacts demand for meat products); *Factory Farming: Assessing Investment Risks: 2016 Report* 24, FARM ANIMAL INVESTMENT RISK AND RETURN, available http://www.fairr.org/wp-content/uploads/FAIRRReportFactoryFarmingAssessingInvestmentRisks.pdf ("[c]ompanies implicated in poor animal welfare scandals may face severe reputational damage and

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in HSUS's interest, as well as the interest of SEC, that investors efficiently be made aware of companies engaging in inhumane and unsustainable practices, which adversely affect the climate and are likely to have material effects on the company's bottom line, so that investors can respond to this information, ensuring securities markets function as designed. Accordingly, the HSUS encourages the Commission to develop industry-specific climate change and ESG disclosure requirements for the animal agriculture sector.

Respectfully submitted,

/s/ Laura Fox

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The Humane Society of the United States
[redacted]

consumer boycotts."); *Business and Financial Disclosure Required by Regulation S-K*, 81 Fed. Reg. 23, 916 (proposed Apr. 22, 2016) (codified at 17 C.F.R. pts. 210, 229, 230, 232, 239 & 249) (recognizing that climate change risk factors can affect businesses' reputations).