TAKING A RIGHTS-BASED APPROACH TO MEAT SUBSIDIES TO ADDRESS THE DUAL CHALLENGES OF FOOD INSECURITY AND CLIMATE CHANGE: A COMPARATIVE ANALYSIS OF THE US, EU, AND UK AGRI-FOOD POLICIES

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ABSTRACT

Meat production has devastating environmental impacts. It contributes to not only greenhouse gas emissions and climate change, but also natural resources depletion, biodiversity loss, water pollution, and other environmental problems, which together pose a serious threat to agricultural sustainability and food security. Despite these negative impacts, global meat consumption is on the rise, with many governments having implemented meat subsidies and thereby facilitating this trend. For example, the United States (US) channels a staggering $38 billion every year towards subsidizing its meat and dairy industries. The European Union (EU) allocates over €46 billion ($50.5 billion) annually to the livestock sector, whilst the United Kingdom (UK) dedicates around £1.5 billion ($2 billion)—about half of its agricultural subsidies—to the same sector.

This Article examines meat subsidies from a human rights perspective. It argues that meat subsidies are unsustainable for the planet and human well-being and, therefore, require structural reform. However, the Article does not call for a vegan future, as all individuals have the right to choose their dietary preferences. Instead, it proposes a rights-based approach to subsidies to address the dual challenges of food insecurity and

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climate change. This Article is divided into five parts. The introduction describes the complex interplay between meat subsidies, climate and environmental impacts of meat production, and food insecurity. Part I examines state obligations to uphold the right to food under international and national laws. It also discusses the four key elements of this right, specifically availability, accessibility, adequacy, and sustainability. Parts II and III review subsidy schemes in the US, EU, and UK that directly and indirectly support meat production and argue that while these subsidies have addressed some concerns associated with the first three key elements of the right to food, they have also introduced more serious problems within these elements. The greatest concern, however, is that meat subsidies perpetuate unsustainable agricultural practices and consumption patterns that severely undermine the fourth key element of the right to food: sustainability. Parts IV and V investigate a rights-based approach to subsidies and conclude that governments should consider adopting this approach to improve sustainability for both the planet and human well-being.

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INTRODUCTION

Climate change is the "defining crisis of our time."[1] It poses a dire threat to both the natural environment and societies,[2] with "no corner of the globe" spared from its impact,[3] and as the United Nations (UN) notes, "it is happening . . . more quickly than we feared."[4] While climate change alters weather patterns and increases the frequency of extreme weather events,[5] it also presents serious risks to "our health, ability to grow food, housing, safety and work."[6] Particularly in recent years, there has been a growing concern about the adverse effects of climate change on the agricultural sector,[7] as it is starting to affect food availability, accessibility, adequacy, and sustainability—the four key elements of the right to food.[8]

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1 *The Climate Crisis – A Race We Can Win*, UNITED NATIONS, https://www.un.org/en/un75/climate-crisis-race-we-can-win#:~:text=Global%20warming%20impacts%20everyone's%20food,or%20wasted%20as%20a%20result [https://perma.cc/UX7L-5ETV] (last visited Oct. 8, 2024).

2 *Climate Change the Greatest Threat the World Has Ever Faced, UN Expert Warns*, U.N. OFF. OF THE HIGH COMM'R FOR HUM. RTS (Oct. 21, 2022), https://www.ohchr.org/en/press-releases/2022/10/climate-change-greatest-threat-world-has-ever-faced-un-expert-warns [https://perma.cc/FD6W-ALCP].

3 U.N. OFF. OF THE HIGH COMM'R FOR HUM. RTS, *supra* note 2.

4 *Id.*

5 *Causes and Effects of Climate Change*, U.N. CLIMATE ACTION, https://www.un.org/en/climatechange/science/causes-effects-climate-change#:~:text=As%20greenhouse%20gas%20emissions%20blanket,the%20usual%20balance%20of%20nature [https://perma.cc/K3RC-JD6H] (last visited Oct. 8, 2024).

6 *What Is Climate Change*?, U.N. CLIMATE ACTION, https://www.un.org/en/climatechange/what-is-climate-change (last visited Oct. 8, 2024) [https://perma.cc/3NHQ-RKY5]; *see also* Karleen N. Méndez Benítez, *The Meat Industry: A Link Between Global Pandemics, Climate Change, and Economic Crisis*, 91 REV. JUR. U.P.R. 47, 58–59 (2022) ("The increases in GHG and global temperatures in the past decades . . . [place] our safety and planet in danger.").

7 Akila Wijerathna-Yapa & Ranjith Pathirana, *Sustainable Agro-Food Systems for Addressing Climate Change and Food Security*, 12 AGRIC. 1, 6–7 (2022).

8 Luis Moisés Peña-Lévano, et al., *Climate Change Interactions with Agriculture, Forestry Sequestration, and Food Security*, 74 ENV'T. RES. & ECON. 653, 653 (2019); *e.g., see* Tshepo Masipa, *The Impact of Climate Change on Food Security in South Africa: Current Realities and Challenges Ahead,* 9 J. DISASTER RISK STUDIES 1, 1-7 (2017); Tim Wheeler & Joachim von Braun, *Climate Change Impacts on Global Food Security*, 341 SCIENCE 508, 508-13 (2013).

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Indeed, frequent natural disasters triggered by climate change have undermined global agri-food systems and "exacerbate[d] food insecurity worldwide."[9] For example, millions of people in southern Africa are currently experiencing acute hunger and malnutrition as the region faces devastating "El Niño-fuelled drought and floods."[10] Changing climate conditions have also increased the prevalence of crop pests and diseases,[11] as evidenced by the 2020 locust outbreaks in East Africa, parts of South Asia, and the Middle East, which caused food shortages and famine in these regions.[12] Animal agriculture is also subject to multiple stressors as a result of climate change—for example, "decreased feed availability and quality, heat stress, diseases (from outbreaks and weakened animal immune system) and mortality from extreme climate events."[13] Furthermore, climate change threatens future generations' food security by compromising agricultural sustainability.[14]

Human activities stand as the primary driver of climate change,[15] specifically through the release of greenhouse gas (GHG) emissions.[16] While the burning of fossil fuels remains the primary source of GHG emissions,[17] the livestock sector, which relies on intensive farming, also

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[9] Wijerathna-Yapa & Pathirana, *supra* note 7, at 1; *see also* Méndez Benítez, *supra* note 6, at 58–59.

[10] *See, e.g.*, *Devastating Drought and Floods in Southern Africa: WFP Chief Calls for Global Action as Millions Face Food Insecurity*, WORLD FOOD PROGRAMME (May 22, 2024), https://www.wfp.org/news/devastating-drought-and-floods-southern-africa-wfp-chief-calls-global-action-millions-face [https://perma.cc/SQ3P-BC2X].

[11] *See, e.g.*, Brajesh K. Singh, et al., Climate Change Impacts on Plant Pathogens, Food Security and Paths Forward, 21 NATURE REV. MICROBIOLOGY 640, 640–656 (2023); Léonard Schneider et al., *The Effect of Climate Change on Invasive Crop Pests Across Biomes*, 50 CURRENT OP. INSECT SCI. 1, 1–5 (2022); Wijerathna-Yapa & Pathirana, *supra* note 7, at 7.

[12] *The Locust Crisis: The World Bank's Response*, WORLD BANK GROUP (July 1, 2020), https://www.worldbank.org/en/news/factsheet/2020/04/27/the-locust-crisis-the-world-banks-response [https://perma.cc/MGG2-74GX].

[13] Cecile M. Godde et al., *Impacts of Climate Change on the Livestock Food Supply Chain; A Review of the Evidence*, 28 GLOB. FOOD SEC. 1, 1–17 (2021).

[14] *See generally*, Ying Chen, *Improving Sustainability and Promoting the Right to Holistic Food: The Role of Agribusiness*, 31 FLA. J. INT'L L. 143 (2019).

[15] Kevin E. Trenberth, *Climate Change Caused by Human Activities is Happening and It Already Has Major Consequences*, 36 J. ENERGY & NAT RES. L. 463, 463–81 (2018) (noting that humans are "the main agents of [climate] change.").

[16] *Causes of Climate Change*, EPA, https://www.epa.gov/climatechange-science/causes-climate-change [https://perma.cc/85L2-6533] (last visited Oct. 8, 2024) (noting that it includes "large amounts of carbon dioxide [CO2] and other greenhouse gases into the atmosphere.").

[17] U.N. CLIMATE ACTION, *supra* note 5; *see also* Trevor J. Smith, *Corn, Cows, and Climate Change: How Federal Agricultural Subsidies Enable Factory Farming and Exacerbate U.S. Greenhouse Gas Emissions*, 9 WASH. J. ENV'T. L. & POL'Y 26, 32 (2019) ("[E]nergy-related activities primarily emit carbon dioxide through the burning of fossil fuels.").

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has a high carbon footprint.[18] *Livestock's Long Shadow*, an early report published by the UN Food and Agriculture Organization, estimated that the livestock sector accounted for 18 percent of the global emissions if "measured in CO2 equivalent."[19] Cattle were identified as the key source of emissions in this sector (65 percent),[20] followed by chickens (14 percent) and pigs (7 percent).[21] In fact, the report recognized the livestock sector as "one of the top two or three . . . contributors to the most significant environmental problems, at every scale from local to global."[22] Apart from its impact on the atmosphere and climate, the livestock sector is also "a major stressor on many ecosystems and on the planet as whole;"[23] "the single largest anthropogenic user of land" that "accounts for 70 percent of all agricultural land and 30 percent of the land surface of the planet;"[24] "a key player in increasing water use;" "the largest sectoral source of water pollution;"[25] and "the leading player in the reduction of biodiversity"[26]—and this remains the case, as discussed in Part III.

While the international community has been actively engaged in efforts to mitigate and adapt to climate change—for example, with the Paris Agreement[27]—most of the existing efforts focus on reducing the emissions from "the energy and transportation sectors,"[28] overlooking

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[18] Samuel Jutzi, *Introduction*, *in* LIVESTOCK'S LONG SHADOW: ENVIRONMENTAL ISSUES AND OPTIONS iii, iii (Paul Harrison & Rosemary Allison eds., 2006); *see also* Debra L. Donahue, *Livestock Production, Climate Change, and Human Health: Closing the Awareness Gap*, 45 ENV'T. L. REP. NEWS & ANALYSIS 11112 (2015).

[19] LIVESTOCK'S LONG SHADOW, *supra* note 18, at xxi.

[20] Donahue, *supra* note 18, at 11112–13.

[21] Lingxi Chenyang, *Is Meat the New Tobacco? Regulating Food Demand in the Age of Climate Change*, 49 ENV'T. L. REP. NEWS & ANALYSIS 10344, 10346 (2019); PIERRE J. GERBER ET AL., TACKLING CLIMATE CHANGE THROUGH LIVESTOCK: A GLOBAL ASSESSMENT OF EMISSIONS AND MITIGATION OPPORTUNITIES 46 (2013); *Global Greenhouse Gas Emissions Data*, EPA, https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data [https://perma.cc/F8VY-PF6B] (last visited Oct. 8, 2024).

[22] LIVESTOCK'S LONG SHADOW, *supra* note 18, at xx.

[23] *Id.* at 267.

[24] *Id.* at xxi.

[25] *Id.* at xxii ("The livestock sector is a key player in increasing water use, accounting for over 8 percent of global human water use, mostly for the irrigation of feed crops. It is probably the largest sectoral source of water pollution, contributing to eutrophication, 'dead' zones in coastal areas, degradation of coral reefs, human health problems, emergence of antibiotic resistance and many others.").

[26] *Id.* at xxiii.

[27] *See generally* Annalisa Savaresi, *The Paris Agreement: A New Beginning?*, 34 J. ENERGY & NAT. RES. L. 16 (2016).

[28] Smith, *supra* note 17, at 26; Kayla Karimi, *Stopping Livestock's Contribution to Climate Change*, 36 UCLA J. ENV'T. L. & POL'Y 347, 348 (2018) ("The most commonly known contributors to

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agricultural emissions in general[29] and livestock emissions in particular.[30] Dr. Sinead Leahy et al. note that "no single country currently exposes agricultural emissions to any mandatory carbon price and current evidence suggests considerable reluctance to the application of other climate policies with comparable stringency to agriculture."[31] Professor Debra L. Donahue also observes that "'Livestock's long shadow' has been conspicuously absent from most policy discussions."[32] However, this may be subject to change as the Danish government announced in June 2024 that it will implement the world's first carbon tax on agriculture starting in 2030.[33]

The exclusion of the livestock sector in the emissions reduction agenda can be attributed to the sector's crucial role in the agricultural economy in many countries. For example, the Organization for Economic Co-operation and Development, in its 2023 report, revealed that livestock products account for 38 percent, 39 percent, and 60 percent of the total value of agricultural outputs in the United States (US), European Union (EU), and United Kingdom (UK), respectively.[34]

Modern dietary preferences for meat are another key reason that livestock emissions are disregarded in the global climate change objectives.[35] Additionally, it is important to note that the rise in meat

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climate change—car emissions, oil production, coal energy, and other energy sources— tend to be addressed in climate change law and policy.").

[29] Sinead Leahy et al., *Challenges and Prospects for Agricultural Greenhouse Gas Mitigation Pathways Consistent with the Paris Agreement*, 4 FRONTIERS SUSTAINABLE FOOD SYS. 1, 1 (2020); ROB BAILEY ET AL., LIVESTOCK: CLIMATE CHANGE'S FORGOTTEN SECTOR: GLOBAL PUBLIC OPINION ON MEAT AND DAIRY CONSUMPTION 12 (2014) (noting that it overlooks agricultural emissions in general and emissions from "livestock production in particular.").

[30] Karimi, *supra* note 28, at 348.

[31] Leahy et al., *supra* note 29, at 1.

[32] Donahue, *supra* note 18, at 11113; However, this is slowly about to change with Denmark implementing a carbon tax on agriculture from 2030 to meet its climate goals. Danish farmers will need to pay a levy based on their carbon emissions from "livestock, fertiliser, forestry and the disturbance of carbon-rich agricultural soils." *See* Lena Hunter, *Denmark Announces World-first Climate Tax on Agriculture – Earmarks Billions for Rewilding* (Jun. 25, 2024), THE COPENHAGEN POST, https://cphpost.dk/2024-06-25/news/climate/denmark-announces-world-first-climate-tax-on-agriculture-earmarks-billions-for-rewilding/ [https://perma.cc/YY89-P4PC].

[33] Hunter, *supra* note 32; Jenny Brunton, *Denmark Agrees Carbon Tax on Agriculture*, BRIT. AGRIC. BUREAU (Jun. 25, 2024), https://www.britishagriculturebureau.co.uk/updates-and-information/denmark-agrees-carbon-tax-on-agriculture/ [https://perma.cc/MNM9-9UAY].

[34] OCED, AGRICULTURAL POLICY MONITORING AND EVALUATION 2023: ADAPTING AGRICULTURE TO CLIMATE CHANGE 314 (2023).

[35] *See, e.g.*, Karimi, *supra* note 28, at 349 ("the strong cultural desire for animal products in the typical American diet."); *see also* Christopher L. Delgado, *Rising Consumption of Meat and Milk in Developing Countries Has Created a New Food Revolution*, 133 J. NUTRITION 3907S, 3907S-3910S (2003).

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production and consumption is largely driven by excessive agricultural subsidies provided by governments in developed economies, such as the US, the EU, and the UK.

While, historically, meat consumption symbolized affluence and social status[36] (and it still does in some societies),[37] economic prosperity and improved agricultural practices, particularly intensive animal farming since the Green Revolution,[38] have made meat more affordable and accessible to the general population.[39] Meat has become an essential component of the modern diet.[40] For example, in the US and most European countries, meat often serves as the main ingredient in meals, accompanied by other items such as vegetables or carbohydrates.[41] Therefore, despite the livestock sector being a significant contributor to climate change and a threat to agricultural sustainability, global meat consumption continues to rise, with many governments having implemented direct and indirect meat subsidies and thereby facilitating this trend. The US channels a staggering $38 billion annually towards subsidizing its meat industry.[42] The EU spends €46 billion (out of the €57 billion annual agricultural budget)[43] and the UK spends £1.5 billion

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[36] Lucy Jarosz, *Energy, Climate Change, Meat, and Markets: Mapping the Coordinates of the Current World Food Crisis*, 3 GEOGRAPHY COMPASS 2065, 2074 (2009).

[37] Eugene Y. Chan & Natalina Zlatevska, *Jerkies, Tacos, and Burgers: Subjective Socioeconomic Status and Meat Preference*, 132 APPETITE 257, 257–66 (2019).

[38] *See, e.g.*, R. Jason Richards & Erica L. Richards, *Cheap Meat: How Factory Farming Is Harming Our Health, the Environment, and the Economy*, 4 KY. J. EQUINE AGRIC. & NAT. RESOURCES L. 31, 32 (2011-2012) (noting that "Proponents of factory farming argue . . . that aggregating production creates economies of scale, which allow massive amounts of meat to be produced at very low cost compared to older, more traditional livestock operations."); Andrew Wasley & Madlen Davies, *The Rise of the "Megafarm": How British Meat is Made* (July 17, 2017), https://salutethepig.com/wp-content/uploads/2017/08/The-rise-of-the-_megafarm__-How-British-meat-is-made-%E2%80%94-The-Bureau-of-Investigative-Journalism.pdf [https://perma.cc/C9K2-PJFZ] (noting that "a computer-controlled environment optimized to produce . . .cheap meat."); António Cardoso Marques et al., *Economic Growth, Sustainable Development and Food Consumption: Evidence across Different Income Groups of Countries*, 196 J. Cleaner Production 245, 245‑58 (2018) (noting that economic prosperity makes meat more affordable).

[39] CHRISTOPHER L. DELGADO ET AL., THE COMING LIVESTOCK REVOLUTION, 2 (1999).

[40] Jarosz, *supra* note 36, at 2074; *see also* Méndez Benítez, *supra* note 6, at 50.

[41] Méndez Benítez, *supra* note 6.

[42] *Id.* at 48.

[43] Anniek J. Kortleve et al., *Over 80% of the European Union's Common Agricultural Policy Supports Emissions-Intensive Animal Products*, 5 NATURE FOOD 288 (2024); Ajit Niranjan, *EU Pumps Four Times More Money into Farming Animals than Growing Plants,* THE GUARDIAN (Apr. 2, 2024), https://www.theguardian.com/environment/2024/apr/01/eu-four-times-more-money-farming-animals-than-growing-plants-cap-subsidy/ [https://perma.cc/Y6XR-JYTE]

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(around half of its agricultural subsidies) every year to support livestock farming.[44] These subsidies provide financial incentives for farmers to produce more meat, while enabling consumers to increase meat consumption through lowering retail prices.[45] These three jurisdictions will be examined as case studies in Parts II and III due to the size of their subsidies and their impacts on food insecurity and climate change.

As the concern over the livestock sector's sustainability impacts continues to grow, the world stands at a crossroads. The choice lies between continuing to subsidize meat production to meet the growing demand at the cost of climate change and environmental degradation or reducing livestock numbers to lower emissions and ensure sustainable food sources for all. This Article does not call for a vegan future, as it acknowledges the importance of meat in global diets[46] and respects individuals' right to choose their dietary preferences. However, the heavily subsidized meat-centric food systems are not sustainable for the planet and human well-being, and, thus, require structural reform.

This Article examines meat subsidies from a human rights perspective. This Article is divided into five parts. The Introduction describes the complex interplay between meat subsidies, climate and environmental impacts of meat production, and food insecurity. Part I examines state obligations to uphold the right to food under international and national laws. It also discusses the four key elements of this right—specifically availability, accessibility, adequacy, and sustainability. Parts II and III review subsidy schemes in the US, EU, and UK that directly and indirectly support meat production and argue that while these subsidies have addressed some concerns associated with the first three key elements of the right to food, they have also introduced more serious problems within these elements. The greatest concern, however, is that meat subsidies encourage unsustainable agricultural practices and consumption patterns that severely undermine the fourth key element of the right to food: sustainability. Parts IV and V investigate a rights-based approach to

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(Emeritus Professor Alan Matthews notes that Anniek J. Kortleve et al's research oversimplifies the existing economic mechanisms).

[44] Kortleve et al., *supra* note 43. *Ditch the Subsidies, DEFRA*, ANIMAL REBELLION https://animalrebellion.org/campaigns/ditch-the-subsidies-defra/ (last visited Oct. 9, 2024) (noting that the U.K.'s annual budget for the meat industry is ten times that allocated for planting trees).

[45] *See, e.g.*, Karimi, *supra* note 28, at 350 (discussing meat subsidies in the U.S.).

[46] *See* Elimear Leahy et al., *An Estimate of the Number of Vegetarians in the World* (The Econ. and Soc. Rsch. Inst. (ESRI), ESRI Working Paper No. 340, 2010), https://www.econstor.eu/bitstream/10419/50160/1/632222107.pdf [https://perma.cc/NA3X-KSRN].

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subsidies and conclude that governments should consider adopting this approach to improve sustainability for both the planet and human well-being.

I. THE RIGHT TO FOOD IN INTERNATIONAL AND DOMESTIC LAWS AND STATE OBLIGATIONS TO UPHOLD THIS RIGHT

The right to food, as a fundamental human right, is explicitly enshrined in international law. The 1948 Universal Declaration of Human Rights first introduced this right as an essential component of the right to an adequate standard of living,[47] stating that "everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food."[48] The International Covenant for Economic, Social and Cultural Rights (ICESCR), adopted in 1966 as a legally binding human rights instrument, delineates state obligations in safeguarding the right to food. Article 11 of ICESCR requires that state parties not only recognize this right,[49] but also take appropriate measures, "individually and through international co-operation," to "improve methods of production, conservation and distribution of food,"[50] and "to ensure an equitable distribution of world food supplies in relation to need."[51] As such, states are responsible for upholding their citizens' right to food and for facilitating the realization of this right beyond their borders.[52] The 1974 Universal Declaration on the Eradication of Hunger and Malnutrition also protects every individual's "inalienable right to be free from hunger and malnutrition in order to develop fully and maintain their physical and mental faculties."[53] Furthermore, the Convention on the Rights of the Child (1989),[54] the Convention on the Elimination of All Forms of

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[47] G.A. Res. 217 (III) A, Universal Declaration of Human Rights, U.N. Doc. A/RES/217(III) (Dec. 10, 1948).

[48] *Id.* art. 25 (1).

[49] International Covenant on Economic, Social and Cultural Rights art. 11, ¶ 1 & 2, Dec. 16, 1966, 993 U.N.T.S. 3 [hereinafter ICESCR].

[50] *Id.* art. 11 ¶ 2.

[51] *Id.* art. 11 ¶ 2.

[52] *Id.* art. 11.

[53] G.A. Res. 3348 (XXIX), The Universal Declaration on the Eradication of Hunger and Malnutrition, art. 1 (Dec. 17, 1974) [hereinafter UDEHM].

[54] United Nations Convention on the Rights of the Child arts. 24, 27, Nov. 20, 1989, 1577 U.N.T.S. 3.

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Discrimination against Women (1979),[55] and the Convention on the Rights of Persons with Disabilities (2006)[56] seek to ensure that disadvantaged and marginalized populations have sustainable access to adequate food and nutrition.[57]

The interpretation of the right to food has evolved over time. In the 1960s–1980s, international law focused on improving food availability and accessibility for all populations.[58] For example, the ICESCR defines the right to food as "the right of everyone to be free from hunger,"[59] and this definition was adopted by the Universal Declaration on the Eradication of Hunger and Malnutrition.[60] The Food and Agriculture Organization further elaborated on this right and explained that food security is "the ability to have an adequate amount of staple food at all times to satisfy consumption and compensate for fluctuations in production and price."[61] During this period of time, the Green Revolution played a pivotal role in improving productivity in the agri-food sector; it promoted industrial agriculture and transformed traditional farming practices by introducing high-yielding crop varieties, increasing the use of fertilizers and pesticides, and implementing modern agricultural technologies and methods.[62] Indeed, the Green Revolution ensured a more abundant and affordable food supply, contributing to enhanced food security worldwide—a turn that we know today also has direct negative climate and environmental consequences.[63]

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[55] United Nations Convention on the Elimination of All Forms of Discrimination Against Women arts. 12, 14, Dec. 18, 1979, 1249 U.N.T.S. 13.

[56] Convention on the Rights of Persons with Disabilities arts. 25, 28, Dec. 13, 2006, 2515 U.N.T.S. 3 (the right to food is protected under Article 25-the right to health and Article 28-the right to an adequate standard of living and social protection).

[57] Ying Chen & Paul McDonough, *Assessing Russia's Weaponization of Food and Its Compliance with International Law: Safeguarding the Right to Food for Ukrainian Civilians and Ensuring Accountability for the War Crime of Starvation*, 43 B.U. INT'L L.J. (forthcoming 2025).

[58] Chen, *supra* note 14, at 148–49.

[59] ICESCR, *supra* note 49, art. 11.

[60] UDEHM, *supra* note 53, art. 1.

[61] Wijerathna-Yapa & Pathirana, *supra* note 7, at 8.

[62] KENNETH DAHLBERG, BEYOND THE GREEN REVOLUTION: THE ECOLOGY AND POLITICS OF GLOBAL AGRICULTURAL DEVELOPMENT (1979); David Pimentel, *Green Revolution Agriculture and Chemical Hazards*, 188 SCIENCE OF THE TOTAL ENVIRONMENT S86, S86-98 (1996) (discussing the impact of the Green Revolution).

[63] Prabhu L. Pingali, *Green Revolution: Impacts, Limits, and the Path Ahead*, 109 PROC. NAT'L ACAD. SCI. 12302, 12302–08 (2012) (discussing the impact of the Green Revolution).

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In the 1990s, as food supply increased, people in the Western World became less concerned about food availability and accessibility;[64] instead, the international community embarked on its efforts to integrate adequacy (i.e., food safety, dietary and cultural preferences for food and nutrition) into the framework of the right to food.[65] For example, the 1996 Rome Declaration on World Food Security stated that every individual has the right to "access to *safe and nutritious food*, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger."[66] The 1996 World Food Summit Plan of Action also declared, "food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their *dietary needs and food preferences* for an active and healthy life."[67] Similarly, the 1999 General Comment No. 12 of the Committee on Economic, Social and Cultural Rights (General Comment No. 12) provided that the availability of food must be "in a quantity and quality sufficient to satisfy the dietary needs of individuals, free from adverse substances, and acceptable within a given culture."[68] It is important to note that General Comment No. 12 acknowledges the importance of sustainability.[69] However, the international community did not recognize it as a key element of the right to food until quite recently.

In 2010, the Office of the United Nations High Commissioner for Human Rights and the Food and Agriculture Organization jointly

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[64] Alexis M. Taylor, *100 Years of Agricultural Trade: A Century of Growth, Innovation, and Progress,* U.S. DEP'T OF AGRIC. (Feb. 22, 2024), https://www.usda.gov/media/blog/2024/02/21/100-years-agricultural-trade-century-growth-innovation-and-progress [https://perma.cc/2GH6-G99Z]; David Kelch & Mary Anne Normile, *European Union Adopts Significant Farm Reform*, U.S. DEP'T OF AGRIC. (Sept. 1, 2004), https://www.ers.usda.gov/amber-waves/2004/september/european-union-adopts-significant-farm-reform/ [https://perma.cc/HYS7-HC3P] (e.g., the U.S. and E.U. have become the world's major agri-food exporters and food availability is not a major concern anymore).

[65] Jennifer Coates, *Build It Back Better: Deconstructing Food Security for Improved Measurement and Action*, 2 GLOBAL FOOD SECURITY 188 (2013).

[66] The Rome Declaration on World Food Security, Food & Agric. Org. (Nov. 13-17, 1996) (emphasis added), http://www.fao.org/docrep/003/w3613e/w3613e00.HTM [https://perma.cc/MX7R-TSP7].

[67] World Food Summit Plan of Action, Food & Agric. Org. (Nov. 13-17, 1996) (emphasis added), https://www.fao.org/4/w3613e/w3613e00.htm [https://perma.cc/G9MA-YFAN].

[68] U.N. ECON. & SOC. COUNCIL, General Comment No. 12, The Right to Adequate Food, 20th Sess., Apr. 26 - May 14, 1999, ¶ 8, UN Doc. E/C. 12/1999/5 (May 12, 1999) (emphasis added).

[69] General Comment No. 12, ¶ 7, U.N. Doc. E/C.12/1999/5 (1999) (noting "[t]he notion of sustainability is intrinsically linked to the notion of adequate food or food security, implying food being accessible for both present and future generations.").

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published the OHCHR Fact Sheet No. 34. (Fact Sheet No. 34);[70] they only identified availability, accessibility, and adequacy as the key elements of the right to food.[71] According to Fact Sheet No. 34, availability refers to sufficient quantities of food sourced "from natural resources either through the production of food, by cultivating land or animal husbandry, or through other ways of obtaining food, such as fishing, hunting, or gathering,"[72] or from markets and shops through purchase.[73] Accessibility encompasses not only physical but also economic access to adequate food and nutrition.[74] Adequacy ensures food safety and individuals' dietary and cultural requirements for food and nutrition.[75]

Despite the explicit exclusion of sustainability in its interpretation of the right to food, Fact Sheet No. 34 does encourage states to "make efforts to enable a sustainable production of food to ensure the availability of food for future generations."[76] Furthermore, Professor Olivier De Schutter, the UN Special Rapporteur on the Right to Food (2008–2014), submitted his final report to the UN in 2014, highlighting the critical need to secure food supply for future generations, particularly through transitioning to an agroecological model that can "improve the resilience and sustainability of food systems."[77] Hilal Elver, De Schutter's successor as the UN Special Rapporteur on the Right to food (2014–2020), also advocated for incorporating sustainability into the framework of the right to food. For example, in her first report to the U.N. General Assembly, Elver emphasized state obligations to "implement sustainable food system policies" to "meet the vital food needs of their people, especially of vulnerable groups and households."[78] In a 2019 report, she officially

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[70] U.N. OFF. OF THE HIGH COMM'R FOR HUM. RTS., Fact Sheet No. 34: The Right to Adequate Food (2010) [hereinafter Fact Sheet No. 34].

[71] *Id.* at 2–3.

[72] *Id.* at 2.

[73] *Id.*

[74] Ying Chen, *Protecting the Right to Food in the Era of Covid-19 and Beyond*, 49 GA. J. INT'L & COMP. L. 1, 6 (2021).

[75] Fact Sheet No. 34, *supra* note 70, at 3.

[76] *Id.* at 4.

[77] U.N. General Assembly, Olivier De Schutter (Special Rapporteur), Report of the Special Rapporteur on the Right to Food, Final Report: The Transformative Potential of the Right to Food, at 8, A/HRC/25/57, (2014); *see also* XAVIER POUX & PIERRE-MARIE AUBERT, AN AGROECOLOGICAL EUROPE IN 2050: MULTIFUNCTIONAL AGRICULTURE FOR HEALTHY EATING (2018).

[78] *Statement by Hilal Elver, Special Rapporteur on the Right to Food at the 69th Session of the General Assembly Third Committee Item 68 (b & c): Human Rights*, U.N. HUM. RTS. OFF. OF THE HIGH COMM'R (Oct. 24, 2014), https://www.ohchr.org/en/statements/2014/11/statement-hilal-elver-special-rapporteur-right-food-69th-session-general [https://perma.cc/S6JU-BQZH].

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recognized sustainability as one of the key elements of the right to food, noting that the realization of this right "requires tackling the historical and structural inequalities that undermine availability, adequacy, accessibility and sustainability of food systems."[79]

Indeed, as Parts II and III demonstrate, meat subsidies in all three case studies have been in place for so long that they have created systemic issues, and, as a result, must be reassessed and reformed to address existing and emerging challenges. This Article endorses Elver's interpretation of the right to food and applies the four key elements in the subsequent analysis—namely, availability, accessibility, adequacy, and sustainability.

Despite being a well-established human right in international law, in practice, the implementation of the right to food at the international level faces significant challenges, particularly when it comes to states' shared responsibility to support the realization of this right beyond their borders.[80] This is largely attributed to the fact that states operate as autonomous actors and their choices to disregard international obligations continue to compromise the international rule of law.[81] Particularly, the absence of effective enforcement mechanisms with the UN and its agencies, along with "the essentially voluntary nature of States' participation in international legal regimes,"[82] complicates the implementation of international law in general and the right to food specifically.[83]

Despite the lack of commitment to international law, states still bear the primary responsibility for upholding their citizens' human rights in domestic contexts.[84] Indeed, as Professor Smita Narula observes, the implementation of human rights norms is largely state-centric,[85] given that human rights "are the by-product of relationships between governments and the individuals they govern, rather than relationships between global actors and individuals worldwide whose rights are affected by their

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[79] Hilal Elver (Special Rapporteur on the Right to Food), Right to Food, ¶ 3, U.N. Doc. A/74/164 (July 15, 2019), at 4.

[80] ICESCR, *supra* note 49, art. 11.

[81] *See generally* G. G. Fitzmaurice, *The Foundations of the Authority of International Law and the Problem of Enforcement*, 19 MOD. L. REV. 1, 1–13 (1956); *see also* Matúš Štulajter, *Problem of Enforcement of an International Law – Analysis of Law Enforcement Mechanisms of the United Nations and the World Trade Organization*, 33 J. MOD. SCI. 325, 325 (2017).

[82] Chen & McDonough, *supra* note 57.

[83] Benedict Sheehy & Ying Chen, *Let Them Eat Rights: Re-Framing the Food Insecurity Problem Using a Rights-Based Approach,* 43 MICH. J. INT'L L. 631, 659 (2022).

[84] *Id.* at 660; ICESCR, *supra* note 49, art. 11.

[85] Smita Narula, *The Right to Food: Holding Global Actors Accountable Under International Law*, 44 COLUM. J. TRANSNAT'L L. 691, 724 (2006).

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actions."[86] Furthermore, as compared to international organizations such as the UN and its agencies, states have the power to not only enact domestic laws and policies to safeguard human rights but also to establish effective enforcement mechanisms to implement them, ensuring accountability and access to remedy when necessary.[87] As such, states have both the obligation and capacity to uphold the right to food in domestic contexts.

States around the globe have adopted different approaches to upholding the right to food domestically, although the effectiveness of these approaches varies due to a range of factors, such as social and economic inequality, policy gaps, armed conflicts, and supply chain disruptions.[88] Domestic approaches to the right to food can be largely categorized into three distinct groups: explicit constitutional protections, implicit constitutional protections, and the integration of the key elements of this right in domestic laws (other than the constitutions), policies, and programs.[89]

Some states, such as Switzerland, Mexico, and South Africa, offer explicit constitutional protections for the right to food,[90] making it a fundamental legal obligation for their governments to ensure their citizens' access to adequate food and nutrition. Such constitutional recognition also enables individuals to claim and defend their right to food through domestic judicial mechanisms. Nevertheless, none of the states in our case studies have an explicit constitutional right to food.[91]

Most states in the world provide implicit constitutional protection and allow the right to food to be enforced through broader human rights that are explicitly enshrined in their constitutions, such as the right to life,[92] the right to development,[93] and respect for human dignity.[94] Most EU Member States take this approach. For example, Bulgaria, Croatia, Estonia, Cyprus, Finland, Germany, Greece, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, and Spain protect

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[86] *Id.* at 694.

[87] Sheehy & Chen, *supra* note 83, at 660–661.

[88] Ying Chen & Benedict Sheehy, *Conceptualizing Multi-Level Legal Systems to Address Global Food Security: The Hard Law-Soft Law Interface of International Law and Corporate Social Responsibility*, 34 IND. INT'L & COMP. L. REV. 415, 417 (2024).

[89] Sheehy & Chen, *supra* note 83, at 661.

[90] *Id.* at 662–64.

[91] *Id.* at 666–67.

[92] *Id.* at 667 (e.g., Sudan and Somalia protect the right to food through the constitutional right to life).

[93] *Id.* at 682 (Ethiopia protects the right to food through the constitutional right to development).

[94] *Id.* at 665–67.

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the right to food through their constitutional right to life; Belgium protects it through its overarching right to "lead a life in keeping with human dignity."[95]

Last, a few states, such as the US and the UK, do not take a constitutional approach to the right to food.[96] This does not mean that they disregard this fundamental human right.[97] They still take necessary steps to uphold it, specifically through the integration of key aspects of the right into domestic laws and policies.[98]

In summary, the right to food is well-established in both international and domestic laws. States have the obligation to uphold this right for their citizens through the enactment and implementation of domestic laws, policies, and programs.[99] They also have the shared responsibility to facilitate the realization of the right for individuals beyond their jurisdictions.[100] However, as discussed below, meat subsidies do not fully align with state obligations pertaining to the right to food. Parts II and III use the US, EU, and UK (specifically England) as case studies to investigate the impacts of meat subsidies, particularly through the lens of the four key elements of the right to food.

II. MEAT SUBSIDIES IN THE US, EU, AND UK

Governments around the world provide approximately $600 billion each year to support their agricultural sectors,[101] with such support being particularly prominent in developed economies like the US, EU, and UK.[102] Furthermore, as noted, a substantial portion of agricultural

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[95] *Id.* at 667 & 679; CONSTITUTION BELGE COORDONNEE [CONSTITUTION] Feb. 17, 1996, art 23 (Belg.)

[96] *Id.* at 666–67; *See* Michael Cardwell & Clare James, *The Right to Food: A United Kingdom Perspective*, *in* THE INCOHERENCE OF HUMAN RIGHTS IN INTERNATIONAL LAW: ABSENCE, EMERGENCE AND LIMITATIONS (Louisa Ashley & Nicolette Butler eds., 2024) (discussing the right to food and its implementation in the U.K).

[97] Chen, *supra* note 14, at 149–50.

[98] *Id.*, for example, the United States and Australia protect the right to food through extra-constitutional laws.

[99] Sheehy & Chen, *supra* note 83, at 667.

[100] ICESCR, *supra* note 49, at art. 11.

[101] David Laborde et al., *Agricultural Subsidies and Global Greenhouse Gas Emissions*, 12 NAT. COMMC'N. 1, 1-9 (2021), for example, Dr. Marco Springmann and Dr. Florian Freund's research finds that in 2017, the E.U., including the U.K., accounted for 32% and the U.S. was responsible for 12% of the global agricultural subsidies.

[102] Marco Springmann & Florian Freund, *Options for Reforming Agricultural Subsidies from Health, Climate, and Economic Perspectives*, 13 NAT. COMMC'NS. 1, 2 (2022).

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subsidies in these three jurisdictions has been directed towards livestock and feed production, despite a pressing need for structural reform to better align with sustainability goals.[103] The following section examines the growing demand for meat in the US, EU, and UK as well as its contributing factors, with a particular focus on their subsidy policies as those policies are the main driver of this phenomenon. In this Article, unless otherwise specified, meat subsidies encompass both direct subsidies, which support livestock production, and indirect subsidies, which support feed production.

A. STRONG PREFERENCE FOR MEAT-CENTRIC DIETS

All three jurisdictions have a strong meat-eating culture.[104] According to the United States Department of Agriculture (USDA), Americans consumed an estimated average of over 220 pounds (approximately 100 kilograms) of meat per capita each year between 2012 and 2022.[105] Research conducted by the Johns Hopkins Center for A Liveable Future shows that "the average American eats more than three times the global average,"[106] and the US ranks among one of the highest meat-consuming countries in the world.[107] As for its European counterpart, individuals in the EU consume an average of around 80 kilograms (176 pounds) of meat per capita per year,[108] which is "twice as much animal

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[103] Simona Vallone & Eric F. Lambin, *Public Policies and Vested Interests Preserve the Animal Farming Status Quo at the Expense of Animal Product Analogs*, 6 ONE EARTH 1213, 1213–26 (2023).

[104] *See, e.g.,* Méndez Benítez, *supra* note 6, at 50 (discussing the U.S.); Cristina Stewart et al., *Trends in UK Meat Consumption: Analysis of Data from Years 1–11 (2008–09 to 2018–19) of the National Diet and Nutrition Survey Rolling Programme*, 5 THE LANCET E699, E699–E708 (2021) (discussing the U.K.).

[105] Adriana Valcu-Lisman, *Per Capita Red Meat and Poultry Consumption Expected to Decrease Modestly in 2022*, U.S. DEP'T OF AGRI. ECON. RSCH. SERV. (Apr. 15, 2024), https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=103767 [https://perma.cc/PN35-V9JD].

[106] *Meat Consumption: Trends and Health Implications*, JOHN HOPKINS CTR. FOR A LIVEABLE FUTURE, https://clf.jhsph.edu/projects/technical-and-scientific-resource-meatless-monday/meatless-monday-resources/meatless-monday-resourcesmeat-consumption-trends-and-health-implications (last visited Oct. 11, 2024) [https://perma.cc/LG9E-E69P].

[107] Karimi, *supra* note 28, at 363 (noting that Americans consume "more meat than almost any other country in the world.").

[108] *See* Michael Goodier & Viktor Sunnemark, *UK Meat Consumption at Lowest Level Since Records Began, Data Reveals*, THE GUARDIAN (Oct. 25, 2024), https://www.theguardian.com/environment/2023/oct/24/uk-meat-consumption-lowest-level-since-record-began-data-reveal [https://perma.cc/8BWQ-FXU9].

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protein than the global per-capita average."[109] Individuals in the UK also consume about 52 kilograms (115 pounds) of meat per person annually.[110] While British consumption of animal-based proteins is half of that in the US, it is still significantly higher than the global average of 34 kilograms (75 pounds).[111]

Americans' swelling appetite for meat is largely driven by its lower prices compared to many other countries around the globe;[112] in fact, the market price for meat is artificially low in the US.[113] The Institute for Agriculture and Trade Policy suggests that below-cost feed crops reduce operational expenses by 7–10 percent for poultry and pig producers.[114] As for beef, David Robinson Simon used McDonald burgers as an example to compare the retail price and production cost, suggesting that Big Macs "should cost an additional $0.70—a 15% hike over its average retail price in the United States of $4.56 in 2013."[115] Mark Bittman endorsed Simon's conclusion, noting that "what [Americans] pay for a cheeseburger is the price, but price isn't the cost. It isn't the cost to the producers or the marketers and it certainly isn't the sum of the costs to the world; those true

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[109] HENK WESTHOEK ET AL., THE PROTEIN PUZZLE: THE CONSUMPTION AND PRODUCTION OF MEAT, DAIRY AND FISH IN THE EUROPEAN UNION, 65 (2011); *see also* Jon Henley et al., *Greens v 'Beefatarians': Europeans Go to War over Their Dinner*, THE GUARDIAN (Jan. 21, 2022, 5:30 PM), https://www.theguardian.com/environment/2022/jan/21/the-greens-want-to-take-our-meat-away-europeans-go-to-war-over-their-dinner [https://perma.cc/X242-7YNP].

[110] U.K. Department for Environment Food & Rural Affairs, *Accredited Official Statistics Family Food 2020/21*, GOV.UK (Apr. 25, 2023), https://www.gov.uk/government/statistics/family-food-202021/family-food-202021 [https://perma.cc/RF7P-BLQ2].

[111] *Per Capita Consumption of Meat in the United Kingdom from 2007 to 2022 with a Forecast for 2027 (in kilograms per capita), by Meat Type*, STATISTA (Sept. 26, 2023), https://www.statista.com/statistics/1409781/per-capita-meat-consumption-in-the-united-kingdom/ [https://perma.cc/W62T-L8UY]; M. Shahbandeh, *Meat Consumption Worldwide from 1990 to 2023, by Meat Type (in Million Tons)*, STATISTA (July 31, 2024), https://www.statista.com/statistics/274522/global-per-capita-consumption-of-meat/ [https://perma.cc/3AAP-TEJN].

[112] Karimi, *supra* note 28, at 363; Dan Charles, *The Making of Meat Eating America,* NPR: THE SALT (June 26, 2012, 3:03 AM), http://www.npr.org/sections/thesalt/2012/06/26/155720538/the-making-of-meat-eating-america [https://perma.cc/PD9G-D9JJ] (noting that it has been low as compared to many other countries).

[113] Matthew Gruneberg, *Farm Bill Subsidies Violate Environmental Justice Principles Without Recourse*, 24 VT. J. ENV'T. L. 326, 335 (2023) (noting that "[b]y subsidizing crops which become animal feed, farmers are incentivized to grow a product that would ordinarily cost more to manufacture than to sell.").

[114] Anthony Kammer, *Cornography: Perverse Incentives and the United States Corn Subsidy*, 8 J. FOOD L. & POL'Y 1, 26–27 (2012).

[115] Smith, *supra* note 17, at 48–49.

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costs are much greater than the price."[116] Similarly, in the EU and UK, the actual cost of meat is also greater than its retail price as a result of agricultural subsidies. For example, Anniek Kortleve et al.'s research shows that "meat is cheaper than it would be in a fairer market" in the EU as a result of the common agricultural policy (CAP)—a system of the EU's agricultural subsidies and programs.[117] As for how much lower, they note that it is difficult to quantify "as there are many other distortions in the current food system."[118] Professor Jules N. Pretty et al. drew a similar conclusion for the UK, noting that consumers pay much less for beef, lamb, pork, and poultry.[119] It comes as no surprise that the UK exhibits a similar pattern to that of the EU, given that the UK was functioning under the EU's CAP for almost half a century until Brexit in 2020.[120]

These low, or, more specifically, artificially low, prices for meat products arise from two key factors: intensive animal agriculture that expanded to meet consumers' rising demand for meat, and, most importantly, direct and indirect subsidies that support the excessive production of meat and animal feed.[121] The subsequent section examines these two factors, with a particular focus on the latter. It aims to establish the factual context for Part III, which analyzes the impact of meat subsidies on the four fundamental elements of the right to food through a comparative lens.

B. INTENSIVE LIVESTOCK FARMING

The American animal agriculture sector has undergone drastic changes over the past few decades, shifting from small family farms, where generations of farmers raised livestock, to mega-farms and concentrated animal feeding operations, where just a few mega corporations control what Americans eat.[122] The EU and the UK have

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[116] Mark Bittman, *The True Cost of a Burger*, N.Y. TIMES (July 15, 2014), http://www.nytimes.com/2014/07/16/opinion/the-true-cost-of-a-burger.html [https://perma.cc/5G3E-NZVU].

[117] Kortleve et al., *supra* note 43, at 288–92.

[118] *Id.*

[119] Jules N. Pretty, et al., *Farm Costs and Food Miles: An Assessment of the Full Cost of the UK Weekly Food Basket,* 30 FOOD POL'Y 1, 8 (2005).

[120] EMMA DOWNING & SARAH COE, BREXIT: FUTURE UK AGRICULTURE POLICY (2018).

[121] *See, e.g.*, Kortleve et al., *supra* note 43, at 288.

[122] R. Jason Richards & Erica L. Richards, *Cheap Meat: How Factory Farming Is Harming Our Health, the Environment, and the Economy*, 4 KY. J. EQUINE, AGRIC. & NAT. RES. L. 31, 31 (2012); *see also* DAVID KIRBY, ANIMAL FACTORY: THE LOOMING THREAT OF INDUSTRIAL PIG, DAIRY,

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observed similar patterns of change—the consolidation of farmland and the emergence of larger livestock farms[123]—although European farms are sometimes smaller in size compared to their American counterparts.[124]

Intensive animal farming and mass production of meat lie at the heart of modern American animal agriculture.[125] As Lindsay Walton and Kristen King Jaiven note, "approximately 99% of meat and other animal products in the United States are from factory farms."[126] This "high-intensity, high-profit, and high-pollution"[127] livestock farming has emerged due to Americans' high demand for affordable meat products and has been further driven by the agricultural subsidies under the Farm Bill.[128] These subsidy programs disproportionately benefit factory farms because government payments are typically tied to farm size or crop yields, including animal feed.[129] Many small farms have been driven out of business as they "struggle to compete with such low competition prices."[130]

In the EU, pigs and poultry are mostly raised indoors and fed on animal feed in intensive production systems.[131] Farm sizes and production systems for beef,[132] however, differ considerably across the EU,[133] largely due to each Member State's distinctive "natural conditions, . . . economic

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AND POULTRY FARMS TO HUMANS AND THE ENVIRONMENT XIV (2010); Terence J. Centner & Ludivine Petetin, *Permitting Program with Best Management Practices for Shale Gas Wells to Safeguard Public Health,* 163 J. ENV'T. MGMT. 174, 174–83 (2015) (discussing the wider environmental impact of CAFOs).

123 RACHELE ROSSI, SMALL FARMS' ROLE IN THE EU FOOD SYSTEM (2022); *see also* MICHAEL WINTER ET AL., IS THERE A FUTURE FOR THE SMALL FAMILY FARM IN THE UK? (2016).

124 Westhoek et al., *supra* note 109, at 86–88.

125 AGRICULTURE DEPARTMENT NATIONAL AGRICULTURAL STATISTICS SERVICE, 2012 CENSUS OF AGRICULTURE: VOLUME 1, PART 51, GEOGRAPHIC AREA SERIES (2014); Lindsay Walton & Kristen King Jaiven, *Regulating Cafos for the Well-Being of Farm Animals, Consumers, and the Environment*, 50 ENV'T. L. REP. 10485, 10487–88 (2020).

126 *Id.* at 10486; Richards & Richards, *supra* note 122, at 32–33.

127 Walton & Jaiven, *supra* note 125, at 10485; *see also* Mark Bittman, *Rethinking the Meat-Guzzler*, N.Y. TIMES (Jan. 27, 2008), https://www.nytimes.com/2008/01/27/weekinreview/27bittman.html [https://perma.cc/B7UD-N7AL].

128 Gruneberg, *supra* note 113, at 336 (noting that the Farm Bill subsidies drives "demand for cheap meat products.").

129 Kammer, *supra* note 114, at 2–3.

130 Gruneberg, *supra* note 113, at 335.

131 Westhoek et al., *supra* note 109, at 88.

132 CLAUDIA VINCI, EUROPEAN UNION BEEF SECTOR: MAIN FEATURES, CHALLENGES AND PROSPECTS 2 (2022).

133 Westhoek et al., *supra* note 109, at 86–87.

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situation and historical developments."[134] A report published by the PBL Netherlands Environmental Assessment Agency indicated that part of the beef livestock in the EU, particularly in "hilly and mountainous regions,"[135] is "kept in extensive farming systems, where a large part of the feed consists of grass;"[136] another part, however, is raised in highly specialized farms and fed on purchased animal feed besides grass.[137] Farms of all sizes receive financial support from the CAP, although critics contend that these subsidy programs predominantly benefit large landowners, and they encourage the consolidation of farmland in the EU.[138]

In the UK in 2017, Michael Gove, the then Secretary of State for Environment, Food and Rural Affairs declared,

> I do not want to see, and we will not have, US-style farming in this country. The future for British farming is in quality and provenance, maintaining high environmental and animal welfare standards. We have a world-leading reputation based on doing things better, and that will not be compromised while I am in this Department.[139]

Despite Gove's commitment to resist American-style factory farming, data shows otherwise. Intensive livestock agriculture in the UK has grown exponentially over the last decade. Between 2016 and 2023, large factory farms across all livestock sectors have increased by 12 percent, with pig and poultry units experiencing a 20 percent rise.[140] Today 85 percent of farmed animals in the UK are kept in intensive units.[141] The rise in intensive farming in the UK is fueled by consumers' increasing demand for cheap meat[142] and, most importantly, supported by

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[134] Vinci, *supra* note 132, at 2 (noting that differences "exist between western and eastern, and northern and southern regions" within the EU).

[135] Westhoek et al., *supra* note 109, at 86–87.

[136] *Id.*

[137] *Id.* at 87.

[138] Kortleve et al., *supra* note 43.

[139] HC Deb (20 July 2017) (627) col. 961.

[140] *Factory Farms Are Rising Across the UK*, *Our Campaigns: Factory Farming Map*, COMPASSION IN WORLD FARMING, https://www.ciwf.org.uk/our-campaigns/factory-farming-map/ (last visited Oct. 11, 2024) [https://perma.cc/4RDP-RW7Q].

[141] *Id.*

[142] Claire Colley & Andrew Wasley, *UK has More Than 1,000 Livestock Mega-Farms, Investigation Reveals*, THE GUARDIAN (Aug. 18, 2022), https://www.theguardian.com/environment/2022/aug/18/uk-has-more-than-1000-livestock-mega-farms-investigation-reveals [https://perma.cc/GD8Y-SGTG]; Andrew Wasley & Madlen Davies, *The Rise of the "Megafarm": How British Meat is Made*, BUREAU OF INVESTIGATIVE JOURNALISM

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government subsidies.[143] Research shows that "intensive poultry farms across the UK received the most money in subsidies,"[144] followed by intensive pig farms, dairy farms, and beef farms.[145] Former Shadow Secretary of State for Environment, Food and Rural Affairs, Sue Hayman, MP, notes that the UK's subsidy schemes are "encouraging more, and larger, intensive livestock farms."[146]

C. MEAT SUBSIDIES IN THE US

This section begins with a brief overview of the Farm Bill, as it establishes the broad legal framework for agri-food subsidies in the US. Specific emphasis is given to crop subsidies because they contribute to cheap animal feed and they account for most of the meat subsidies in the US, albeit in an indirect way.[147] It also examines direct subsidies that support meat production and consumption in the US.

1. Crop Subsidies Under the Farm Bill and Their Secondary Effect: Indirect Support for the Meat Industry

The Farm Bill is a package of federal legislation that "governs an array of agricultural and food programs" in the US; it is renewed on a regular basis—about every five or six years—to stay relevant to the market and social and economic conditions of its time.[148] As the US Congressional Research Service states, the Farm Bill "provides a predictable opportunity

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(July 17, 2017), https://www.thebureauinvestigates.com/stories/2017-07-17/megafarms-uk-intensive-farming-meat/ [https://perma.cc/X2L5-7R2W].

[143] Andrew Wasley et al., *Intensive Farmers Get £70M in Government Subsidies in Two Years*, BUREAU OF INVESTIGATIVE JOURNALISM (Dec. 28, 2018), https://www.thebureauinvestigates.com/stories/2018-12-28/intensive-farms-get-70m-subsidies/#:~:text=The%20data%20showed%20that%20individuals,sum%20received%20could%20be%20higher [https://perma.cc/JS6K-WFH2].

[144] *Id.*

[145] *Id.*

[146] *Id.*

[147] Marlena Williams, *What the 2023 Farm Bill Could Change for Animals and Farmers*, SENTIENT (Jun. 20, 2023), https://sentientmedia.org/2023-farm-bill-animals/#:~:text=With%20nearly%2070%20percent%20of,raised%20and%20killed%20in%20the [https://perma.cc/5VN4-536T]; Paul Best, *Farm Bill Sows Dysfunction for American Agriculture*, CATO INSTITUTE (Jan. 10, 2024), https://www.cato.org/policy-investigation/farm-bill-sows-dysfunction-american-agriculture [https://perma.cc/8PNT-LAGG].

[148] JIM MONKE & RENÉE JOHNSON, CONG. RSCH. SERV., RS22131, WHAT IS THE FARM BILL? 1 (2024).

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for policymakers to comprehensively and periodically" address issues associated with the American agri-food systems.[149]

The first Farm Bill[150] was introduced in the 1930s to support agricultural production and stabilize food prices during the Great Depression.[151] The most recent one was enacted in 2018 and has been extended until September 30, 2025,[152] when a new Farm Bill or an extension should be passed by US Congress.[153] Over the last century, while the Farm Bill has undergone many changes, it has consistently supported farm income,[154] predominantly through three main schemes: (1) deficiency payments, (2) direct payments, and (3) non-recourse marketing loans.[155]

Deficiency payments, implemented between 1973 and 1996, were direct government payments to farmers that grew specific crops, such as corn and wheat.[156] This payment program compensated farmers for the difference between the government-set target price and "the lower national average market price during a specified time."[157] While US Congress abolished this program in 1996, it introduced a similar one in 2002:[158] the counter-cyclical payments.[159] Counter-cyclical payments cover specific crops only;[160] they also "provide support counter to the cycle of market prices as part of a 'safety net' in the event of low crop prices."[161]

Direct payments, established by the 2002 Farm Bill, are government payments to eligible farmers "whose crops fall within the

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[149] *Id.*

[150] Sidonie Devarenne & Bailey DeSimone, *History of the United States Farm Bill*, LIBR. OF CONG., https://www.loc.gov/ghe/cascade/index.html?appid=1821e70c01de48ae899a7ff708d6ad8b (last visited Oct. 11, 2024) (the first Farm Bill is the Agricultural Act of 1933) [https://perma.cc/55DB-NVYA].

[151] Kammer, *supra* note 114, at 2.

[152] JIM MONKE ET AL., CONG. RSCH. SERV., R47659, EXPIRATION OF THE 2018 FARM BILL AND EXTENSION FOR 2025 (2024).

[153] *Id.* at 17.

[154] Devarenne & DeSimone, *supra* note 150. For example, it has expanded to address issues such as nutrition, health, and food assistance, and environmental and resource conservation.

[155] Kammer, *supra* note 114, at 21.

[156] YING CHEN, TRADE, FOOD SECURITY, AND HUMAN RIGHTS: THE RULES FOR INTERNATIONAL TRADE IN AGRICULTURAL PRODUCTS AND THE EVOLVING WORLD FOOD CRISIS 171 (2014).

[157] Kammer, *supra* note 114, at 22.

[158] *Id.*; JASPER WOMACH, CONG. RSCH. SERV., RS97-905, DIRECT PAYMENTS PROGRAM (DP OR DPP), AGRICULTURE: A GLOSSARY OF TERMS, PROGRAMS, AND LAWS 74 (2005).

[159] Kammer, *supra* note 114, at 22.

[160] U.S. DEP'T OF AGRIC. FARM SERV. AGENCY, FACT SHEET DIRECT AND COUNTER-CYCLICAL PROGRAM (2007), at 1.

[161] *Id.* at 1–2.

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Farm Bill's coverage"[162] and who can demonstrate that they "planted and harvested those crops in the past."[163] Unlike deficiency payments and counter-cyclical payments, direct payments are decoupled from current production and market prices.[164] Instead, they are linked to eligible base acreage[165] and payment yields (i.e., the farm's average yields during a specific period of time).[166]

Marketing assistance loans and loan deficiency payments are another set of federal income support programs under the Farm Bill. Marketing assistance loans provide non-recourse loans to qualifying producers of specific crops, with repayments deferred until after the crops are sold.[167] The initial purpose of marketing assistance loans was to provide short-term financing for farm expenses. However, given that the loans are non-recourse, farmers would face no serious economic cost for failure to repay "when crop prices were low;" they would only "forfeit their crops to the government."[168] Marketing assistance loans are often considered as "another multi-billion dollar subsidy programs,"[169] as farmers would simply accept the loans when "the market price falls below the loan amount."[170] Alternatively, qualifying farmers may opt for the loan deficiency payments when market prices fall below commodity loan rates.[171] The loan deficiency payments enable farmers to "receive the

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[162] Elizabeth Bullington, *WTO Agreement Mandate that Congress Repeal the Farm Bill of 2002 and Enact an Agriculture Law Embodying Free Market Principles*, 20 AM. U. INT'L L. REV. 1211, 1219 (2005).

[163] *Id.* at 1220.

[164] Kammer, *supra* note 114, at 22 (discussing the 2008 Farm Bill).

[165] U.S. DEP'T OF AGRIC., FARM SERV. AGENCY, *supra* note 160, at 1 (noting that "Farmers had a one-time opportunity to select a method for determining base acreage . . . An owner who failed to make an election was considered to have selected 2002 PFC contract acres and, for oilseed base, the minimum eligible 4-year average of oilseed plantings.").

[166] U.S. DEP'T OF AGRIC., FARM SERV. AGENCY, *supra* note 160, at 3.

[167] USDA Farm Service Agency, *Non-Recourse Marketing Assistance Loan Programs*, https://www.fsa.usda.gov/resources/price-support/commodity-loans/non-recourse-loans [https://perma.cc/MB79-JPW6] (last visited Feb. 21, 2025).

[168] *See* CHRIS EDWARDS & TAD DEHAVEN, FARM SUBSIDIES AT RECORD LEVELS AS CONGRESS CONSIDERS NEW FARM BILL 6.

[169] Edwards & DeHaven, *Farm Subsidies at Record Levels As Congress Considers New Farm Bill*, CATO INSTITUTE BRIEFING PAPERS 70, 6 (Oct. 18, 2001), http://www.cato.org/pubs/briefs/bp70.pdf [https://perma.cc/JA9U-6L5A].

[170] Kammer, *supra* note 114, at 24.

[171] U.S. DEP'T OF AGRIC., FARM SERV. AGENCY, FACT SHEET: NONRECOURSE MARKETING ASSISTANCE LOANS AND LOAN DEFICIENCY PAYMENTS 3 (2007).

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benefits of the marketing loan program without having to take out and subsequently repay a commodity loan."[172]

While the subsidy schemes mentioned above are intended to support farmers and stabilize markets,[173] they have gone too far.[174] Indeed, as Kammer notes, they "have [completely] eliminated . . . market forces."[175] Specifically, they encourage the overproduction of agricultural commodities that fall under the Farm Bill,[176] which, in turn, drives down their market prices.[177] As farmers have no incentive to reduce their production, surpluses have to be directed into "other parts of the markets or into the supply chain."[178] For example, with below-cost corn flooding the market, it is turned into a cheaper sugar substitute (corn syrup),[179] a key input for biofuel (ethanol production),[180] and, most importantly, below-cost animal feed for the livestock sector.[181]

It is important to highlight that agricultural subsidies under the Farm Bill focus on supporting five crops: corn, soybean, rice, wheat, and cotton. The first two crops are used predominantly for animal feed rather than human consumption.[182] Below-cost feed crops enable livestock farms, particularly those mega-farms, to save billions of dollars every year on operational costs.[183] The livestock sector has become a major, albeit indirect, beneficiary of crop subsidies under the Farm Bill.[184] On the contrary, specialty crops, such as fruits and vegetables, are largely

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[172] *Id.*

[173] Kammer, *supra* note 114, at 20.

[174] *Id.*

[175] *Id.*

[176] *Id.*

[177] *Id.*

[178] *Id.*

[179] *Id.* at 24.

[180] *Id.* at 24–25; Allen Baker & Steven Zahniser, *Ethanol Reshapes the Corn Market*, 4 AMBER WAVES 30, 30–35 (2006) (showing the growing needs of the US biofuel industry for corn with demand for corn growing faster than the demand from other industries).

[181] Donahue, *supra* note 18, at 11119–20.

[182] Karimi, *supra* note 28, at 361–62 (noting five heavily subsidized crops under the Farm Bill are: corn, wheat, soybean, cotton, and rice.).

[183] Smith, *supra* note 17, at 48; *see* DOUG GURIAN-SHERMAN, CAFOS UNCOVERED: THE UNTOLD COSTS OF CONFINED ANIMAL FEEDING OPERATIONS 3 (2008) (estimating that between 1996 and 2005, CAFOs saved an average of $3.86 billion each year in feed costs because of federal grain subsidies).

[184] Smith, *supra* note 17, at 47.

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excluded from government support,[185] receiving less than one percent of the subsidies allocated to the livestock sector.[186] As the production costs for specialty crops have been artificially inflated, their market share has decreased, leading to reduced availability and affordability.[187]

2. Direct Meat Subsidies

Under the Farm Bill, the livestock sector also receives direct financial support from the government, particularly through various livestock assistance programs. For example, the Livestock Forage Disaster Program (LFP)[188] offers compensation to eligible livestock producers for grazing losses caused by "drought or fire on land that is native or improved pastureland with permanent vegetative cover or that is planted specifically for grazing."[189] The Livestock Indemnity Program (LIP) provides payments to farmers for "livestock deaths in excess of normal mortality" due to "adverse weather or by attacks by animals reintroduced into the wild by the federal government."[190] The Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish offers emergency assistance to eligible livestock producers for "losses due to disease (including cattle tick fever), adverse weather, or other conditions, such as blizzards and wildfires, not covered by LFP and LIP."[191] Moreover, the Emergency Livestock Relief Program provides emergency relief payments to livestock producers, specifically those who "have approved applications through the 2021 Livestock Forage Disaster Program for forage losses due to severe drought or wildfire,"[192] and compensates them for "increases in supplemental feed costs."[193] Direct meat subsidy programs cost the US government billions of dollars every year.[194] Particularly, the Livestock

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[185] Gruneberg, *supra* note 113, at 331 (noting that fruits and vegetables only receive a negligible amount of subsidies under the Farm Bill); *see also* Christina Sewell, *Removing the Meat Subsidy: Our Cognitive Dissonance Around Animal Agriculture,* 73 J. INT'L AFFAIRS, 307, 308 (2020).

[186] Christina Sewell, *Removing the Meat Subsidy: Our Cognitive Dissonance Around Animal Agriculture,* 73 J. INT'L AFFAIRS, 307, 308 (2020).

[187] Kammer, *supra* note 114, at 21.

[188] *See* CHRISTINE WHITT, CONG. RSCH. SERV., R48082, LIVESTOCK FORAGE PROGRAM (LFP): DROUGHT AND WILDLIFE ASSISTANCE 2024).

[189] U.S. DEP'T AGRIC. FARM SERV. AGENCY, DISASTER ASSISTANCE PROGRAMS (2024).

[190] *Id.*

[191] *Id.*

[192] *Id.*

[193] *Id.*

[194] *E.g., see* Karimi, *supra* note 28, at 362 (noting that "in 2009 alone, the government . . . provided the industry $7 billion for weather and natural disaster loss.").

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Forage Disaster Program ranks as the thirteenth largest agricultural subsidy program in the US, costing the government approximately $12 billion between 1995 and 2023.[195]

The US also provides ad hoc government payments to support the meat industry. For example, in June 2021, in response to the COVID-19 pandemic-induced meat shortage, the USDA launched a $500 million support program to enhance meat processing capacity and ensure the supply of meat for American consumers.[196] In April 2023, the USDA announced another two programs worth up to $125 million, specifically the Indigenous Animals Harvesting and Meat Processing Grant Program, and the Local Meat Capacity Grant Program, to "help small and underserved producers market their [meat] products, support thriving local and regional food systems by investing in processing capacity that's closer to farms, and alleviate major bottlenecks in food and agricultural supply chains."[197]

D. SUBSIDIES IN THE EU

The CAP is the framework for agricultural policy for all EU Member States. It works towards a number of key objectives.[198] Article 39 of the Treaty on the Functioning of the European Union sets out the initial goals[199] and that includes increasing agricultural productivity, ensuring a fair standard of living for farmers, stabilizing markets, assuring the availability of supplies, and ensuring the reasonable prices of these supplies.[200] While these goals remain relevant today, additional goals have been incorporated into the framework to "meet changing economic circumstances and citizens' requirements and needs,"[201] such as climate change action, environmental care, preserving landscapes and

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[195] EWG'S FARM SUBSIDY DATABASE, *The United States Farm Subsidy Breakdown, 1995-2023,* https://farm.ewg.org/region.php?fips=00000 (last visited Jun. 22, 2024) (noting that US$11,889,667,724 has been spent between 1995 and 2023) [https://perma.cc/R2LU-HCE9].

[196] Gruneberg, *supra* note 113, at 333.

[197] Press Release, U.S. Dep't Agric., USDA Announces Funding Availability to Expand Meat and Poultry Processing Options for Underserved Producers and Tribal Communities (Apr. 19, 2023) (on file with author).

[198] Treaty on the Functioning of the European Union, Article 39 Consolidated Version of the Treaty on the Functioning of the European Union, 2008 O.J. (C 115/47) [hereinafter TFEU].

[199] *Id.*

[200] *Id.*

[201] *The Common Agricultural Policy at A Glance*, EUROPEAN COMMISSION, https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-glance_en (last visited Oct. 11, 2024) [https://perma.cc/W8U6-VHAS].

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biodiversity, and promoting vibrant rural areas.[202] Since its launch in 1962,[203] the CAP has had profound social, economic, and environmental impacts on the agri-food sector as well as rural communities across the EU.[204]

Early support measures under the CAP (e.g., direct payments and market measures) focused on providing income support to farmers and market stabilization.[205] These measures proved so effective that they transformed the EU from a net food importer into one of the world's largest agri-food exporters.[206] The 1990s marked a shift in policy direction. Since then, the CAP has introduced a series of reforms, moving towards a more comprehensive regime that not only provides income support to farmers,[207] but also creates new obligations and incentives for farmers to protect the environment[208] and improve food quality and safety as well as animal welfare.[209] This is known as the "greening of the CAP," and it continues today,[210] particularly through reducing negative externalities (such as the use of fertilizers and pesticides) and through promoting positive externalities (such as crop diversification and permanent

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[202] *Key Policy Objectives of the CAP 2023-27*, EUROPEAN COMMISSION, https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-2023-27/key-policy-objectives-cap-2023-27_en (last visited Oct. 11, 2024) [https://perma.cc/MKZ3-UZFL].

[203] *See* Carmel Cahill & Berkeley Hill, *Policies Affecting Resource Adjustment in Agriculture in the European Union*, *In* POLICY REFORM AND ADJUSTMENT IN THE AGRICULTURAL SECTORS OF DEVELOPED COUNTRIES 219 (DAVID BLANDFORD & BERKELEY HILL EDS., 2006).

[204] Apostolos G. Papadopoulos, *The Impact of the CAP on Agriculture and Rural Areas of EU Member States*, 4 AGRARIAN S.: J. OF POL. ECON. 22, 22-53 (2015).

[205] Céline Delayen, *The Common Agricultural Policy: A Brief Introduction* (2007), https://www.iatp.org/sites/default/files/451_2_100145_0.pdf [https://perma.cc/MKZ3-UZFL].

[206] Lyn MacNabb & Robert Weaver, *The General Agreement on Tariffs and Trade (GATT): Has Agriculture Doomed the Uruguay Round?,* 26 LAND & WATER L. REV. 761, 765 (1991); *see also* Thomas J. Schoenbaum, *Agricultural Trade Wars: A Threat to the GATT and Global Free Trade*, 24 ST. MARY'S L. J. 1165, 1183 (1993).

[207] *Timeline - History of the CAP*, EUROPEAN COUNCIL, https://www.consilium.europa.eu/en/policies/cap-introduction/timeline-history-of-cap/ [https://perma.cc/DY6M-GWEQ] (last visited Oct. 12, 2024).

[208] *Id.*; *see Conditionality Explained*, EUROPEAN COMMISSION, https://agriculture.ec.europa.eu/common-agricultural-policy/income-support/conditionality_en [https://perma.cc/ZM8R-74EC] (last visited Oct. 12, 2024) (noting that conditionality takes the form of statutory management requirements (SMRs) and good agricultural and environmental conditions (GAEC).).

[209] *Id.*

[210] *See generally*, MICHAEL CARDWELL, THE EUROPEAN MODEL OF AGRICULTURE (2004); BRIAN JACK, AGRICULTURE AND EU ENVIRONMENTAL LAW (2009).

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pasture);[211] however, it has yet to achieve the desired outcomes.[212] Furthermore, while direct payments and market measures fall under Pillar 1 of the CAP,[213] rural development policies were first introduced in 1999 in Pillar 2 with a goal to strengthen rural community sustainability.[214] Specifically, the CAP "put[s] in place a consistent and lasting framework for guaranteeing the future of rural areas and promoting the maintenance and creation of employment."[215] It funds projects that improve rural infrastructure; it also supports economic diversification, environmental sustainability, and improvements in rural employment and quality of life in rural areas.[216] Currently, approximately one third of the entire EU funding is allocated to the CAP,[217] with Pillar 1 receiving 75 percent of the CAP budget and Pillar 2 receiving the remainder.[218]

Despite various reforms pushing for sustainable agriculture and rural development, the CAP, as Alfonso Giuliani and Hervé Baron argue, continues to support the uneven distribution of funds "in favour of large

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[211] Henk Westhoek et al., *Greening the CAP: An Analysis of the Effects of the European Commission's Proposals for the Common Agricultural Policy 2014-2020* (Feb. 2012), PBL NETHERLANDS ENVIRONMENTAL ASSESSMENT AGENCY NOTE, https://www.researchgate.net/profile/Henk-Zeijts-2/publication/320258970_Greening_the_CAP_An_analysis_of_the_effects_of_the_European_Commission's_proposals_for_the_Common_Agricultural_Policy_2014-2020/links/59d7f34eaca272e6095f8ec0/Greening-the-CAP-An-analysis-of-the-effects-of-the-European-Commissions-proposals-for-the-Common-Agricultural-Policy-2014-2020.pdf [https://perma.cc/88TJ-TQDL].

[212] EUROPEAN COURT OF AUDITORS, SPECIAL REPORT BIODIVERSITY ON FARMLAND: CAP CONTRIBUTION HAS NOT HALTED THE DECLINE (2020).

[213] European Parliament, *Financing of the CAP: Facts and* Figures, https://www.europarl.europa.eu/factsheets/en/sheet/106/financing-of-the-cap [https://perma.cc/S8SG-SZ92] (last visited Oct. 11, 2024).

[214] Guido Van Huylenbroeck et al., *Multifunctionality of Agriculture: A Review of Definitions, Evidence and Instruments*, 1 LIVING REVS. IN LANDSCAPE RSCH. 3 (2007); Irina Râmniceanu & Robert Ackrill, *EU Rural Development Policy in the New Member States: Promoting Multifunctionality*?, 23 J. RURAL STUDS. 416, 416-29 (2007) (noting that a second pillar of the CAP was introduced to fight against rural depopulation and strengthen rural development underpinned by a new framing – the multifunctionality of agriculture).

[215] Netherlands Economic Institute, *Rural Development in the Context of the Agenda 2000*, EUR. PARL. DIRECTORATE-GEN. FOR RSCH. AGRIC., FORESTRY & RURAL DEV. SERIES, AGRI 137 EN (2002) at vi.

[216] *Id.,* at 1-81.

[217] *Common Agricultural Policy*, COUNCIL OF THE EU (Jan. 29, 2025) https://www.consilium.europa.eu/en/policies/cap-introduction/#:~:text=About%20one%20third%20of%20the,a%20day%20per%20EU%20citizen [https://perma.cc/H699-XER3].

[218] Financing the CAP, *supra* note 213.

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companies [specialized] in intensive agriculture and livestock farming."[219] Indeed, the European Commission has acknowledged this itself: "20% of the largest farms in the EU account for 80% of agricultural land," and they receive the biggest share of subsidies.[220] The distortion in the distribution of the CAP funds has restricted small farmers' access to public support and further encouraged unsustainable intensive farming practices.[221] Furthermore, research shows that in 2013, when the UK was still an EU Member State, 82 percent of the CAP funds were allocated to support the production of animal-based foods—38 percent directly and 44 percent indirectly with animal feed.[222] These foods account for 84 percent of the EU agri-food-related GHG emissions, although they only supply "35% of EU calories and 65% of proteins."[223] The distribution of the CAP funds has remained consistent since 2013, despite Brexit in 2020.[224]

Although the EU's efforts to tackle sustainability challenges in agriculture and rural developments have yet to achieve the desired outcomes, it has taken additional steps to address climate and environmental concerns in the livestock sector specifically. For example, the EU imposes high border tariffs and tariff-rate quotas on animal-based products;[225] it also supports projects that modernize livestock farms and increase productivity under Pillar 2 and other rural development programs.[226] In July 2023, the EU Member States also initiated a discussion on how to "combat climate change and meet the EU's climate objectives" through the "[c]ulling of cows and restriction of livestock farming in the EU,"[227] although an agreement has yet to be reached.[228] Furthermore, following the Danish government's announcement in June

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[219] Alfonso Giuliani & Hervé Baron, *The CAP (Common Agricultural Policy): A Short History of Crises and Major Transformations of European Agriculture* (2023), UNIVERSITÉ PARIS1 PANTHÉON-SORBONNE (POST-PRINT AND WORKING PAPERS) HAL-04246646, HAL., at. 1.

[220] European Commission, *The Common Agricultural Policy: Separating Fact from Fiction*, EURO. COMMI'N (2009) at 7.

[221] *See* FRANCO SOTTE, LA POLITICA AGRICOLA EUROPEA: STORIA E ANALISI. 28 (2023) (IT.).

[222] Kortleve et al., *supra* note 43.

[223] *Id.*

[224] *Id.*

[225] Alan Matthews, et al., *Trade Impacts of Agricultural Support in the EU*, INT'L AGRIC. TRADE RSCH. CONSORTIUM, Jan. 2007 at 73.

[226] Pia Nilsson & Sofia Wixe, *Assessing Long-Term Effects of CAP Investment Support on Indicators of Farm Performance,* 49 EUR. REV. AGRIC. ECON. 760, 760-95 (2022).

[227] THE EUR. PARLIAMENT, CULLING OF COWS AND RESTRICTION OF FARMING IN THE EU (July 20, 2023), https://www.europarl.europa.eu/doceo/document/E-9-2023-002312_EN.html [https://perma.cc/D56N-8TJ9].

[228] *See id.*

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2024 of a forthcoming carbon tax on agriculture to be implemented in 2030,[229] it is likely that other EU Member States or the EU as a whole may adopt similar measures in the years to come.

The discussion above indicates that the EU intends to enhance sustainability in the agri-food sector in general and the livestock sector in specific; however, existing subsidies and support measures hinder its progress. This Article identifies that Pillar 1 subsidies, specifically direct payments (including coupled income support,[230] and decoupled direct payments,[231] as well as market measures) are the main mechanisms that drive the unsustainable expansion of animal agriculture in the EU, and, therefore, will be examined in detail in the subsequent section.

1. Coupled Income Support

Despite various reforms, the EU has maintained coupled income support for specific agricultural commodities that are "important for socio-economic or environmental reasons."[232] In the livestock sector, farmers that produce sheep and goat meat, beef, and veal receive annual payments (known as "headage payments") based on the number of eligible livestock that they have.[233]

Although headage payments have negatively impacted the environment—most notably through overgrazing, soil erosion, nutrient overload, reduced water infiltration, and poorer flood protection[234]—the livestock sector has always been the largest beneficiary of coupled income support, as acknowledged by the European Commission.[235] In 2022, across all EU Member States, about 73 percent of the total coupled income support budget was directed towards the animal-based foods,[236] allocated

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[229] Hunter, *supra* note 32; Brunton, *supra* note 33.

[230] Parliament and Council Regulation 2021/2115, art. 16, 2021 O.J. (L 435) 1.

[231] *Id*., at art. 16.

[232] *Id.,* at art. 33.

[233] *Id*.; *see also* Murray W. Scown et al., *Billions in Misspent EU Agricultural Subsidies Could Support the Sustainable Development Goals*, 3 ONE EARTH 237, 239 (2020).

[234] ALLAN BUCKWELL ET AL., RURAL INVESTMENT SUPPORT FOR EUR. (RISE), WHAT IS THE SAFE OPERATING SPACE FOR EU LIVESTOCK? 39 (2018), https://risefoundation.eu/wp-content/uploads/2020/07/2018_RISE_Livestock_Full.pdf [https://perma.cc/5PP4-BNXW].

[235] EUR. COMM'N, VOLUNTARY COUPLED SUPPORT: MEMBER STATES' SUPPORT DECISIONS APPLICABLE FOR CLAIM YEAR 2022 2 (May 2022), https://agriculture.ec.europa.eu/document/download/d24d997b-b791-419b-87cb-39419a1224fc_en?filename=vcs-ms-support-decisions-claim-year-2022_en.pdf [https://perma.cc/8JF2-3T4Q].

[236] *Id.* at 2.

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as follows: 39 percent for beef, 13 percent for sheep and goats, and 21 percent for the dairy sector.[237] Under the current CAP (i.e. CAP 2023-27), the EU allocates €23.03 billion ($ 25 billion), which is 12.18 percent of total direct payments, to coupled income support.[238] While the exact amount spent on the livestock sector remains unknown, it is likely to be substantial given the consistent trajectory of significant government support under the CAP.

2. Decoupled Direct Payments

Decoupled direct payments in the EU include four key components: "(a) the basic income support for sustainability; (b) the complementary redistributive income support for sustainability; (c) the complementary income support for young farmers; (d) the schemes for the climate, the environment and animal welfare."[239] To be eligible for these payments, recipients are required to fulfil the "conditionality" requirement (previously known as cross-compliance obligations).[240] They need to "comply with high EU standards for public, plant, and animal health and welfare,"[241] specifically, standards set out in the Statutory Management Requirements and Good Agricultural and Environmental Conditions.[242] This requirement, as the European Commission expects, should "play[] a role in making European farming more sustainable."[243]

While these decoupled direct payments are intended to improve sustainability and "separate financial support to farmers from their level of production of farm commodities,"[244] they have only been done "in an administrative sense."[245] Indeed, decoupled direct payments have become another major form of government support for the livestock sector, similar

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[237] *Id.* at 4–5.

[238] *Direct Payments*, EUR. PARLIAMENT, https://www.europarl.europa.eu/factsheets/en/sheet/109/direct-payments [https://perma.cc/4ATV-VNH] (last visited Oct. 12, 2024).

[239] Regulation 2021/2115, art. 16, 2021 O.J. (L 435) 1 (EU).

[240] *Conditionality Explained*, *supra* note 208.

[241] *Id.*

[242] *Id.*

[243] *Id.*

[244] *See generally* MYLES PATTON ET AL., AGRI-FOOD AND BIOSCIENCES INST., IMPACT OF DECOUPLED PAYMENTS ON PRODUCTION: POLICY BRIEFING REPORT 2 (2021), https://www.afbini.gov.uk/sites/afbini.gov.uk/files/publications/Impact%20of%20Decoupled%20Payments%20on%20Production.pdf [https://perma.cc/U8PH-HVCC].

[245] *Id.* at 2.

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to those in the US as discussed above. [246] Dr. Myles Patton et al. conducted a comparative analysis on the impacts of decoupled payments on productions in the dairy, beef, and sheep sectors in the EU. They concluded that decoupled payments continue to encourage livestock production.[247] These payments had a more significant impact "on production in the beef and sheep sectors, compared to the dairy sector"[248] and "this is likely to reflect the importance of such payments to supporting farm income in these sectors."[249]

3. Market Measures

The CAP has also adopted market measures, such as public intervention, private storage aid,[250] and exceptional measures. These measures seek to stabilize agri-food markets, including, for example, mitigating market crises, enhancing market demand, and assisting the agricultural sector in effectively adapting to market changes.[251]

First, governments of the EU Member States or their agencies may purchase and store specific agricultural products and sell them back on the market later to prevent their prices from falling too low.[252] This price support mechanism, known as public interventions, is only used to protect agricultural commodities that are "prone to fluctuations in price," including wheat, durum wheat, barley, maize, rice, beef and veal, butter, and skimmed milk powder.[253]

Second, private storage aid is available to white sugar, olive oil, flax fiber, beef, pigmeat, sheep and goat meat, as well as specific dairy products.[254] During times of low market prices, the EU grants aid to operators in the private sector and helps them with the cost of storage of

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[246] *Id.* at 2 (noting that decoupled direct payments "continue to exert an influence" on livestock production).

[247] *Id.* at 11, 18–20.

[248] *Id.* at 11.

[249] *Id.* at 11.

[250] Parliament and Council Regulation 2021/2117, 2021 O.J. (L435) 262 (EU).

[251] *Market Measures Explained*, EUR. COMM'N, https://agriculture.ec.europa.eu/common-agricultural-policy/market-measures/market-measures-explained_en [https://perma.cc/VZK5-MK6H] (last visited Oct. 11, 2024).

[252] *Id.*

[253] *Id.*

[254] *Id.* (eligible dairy products include butter, cheese and skimmed milk powder).

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their eligible products for a set period.[255] Private storage aid seeks to mitigate the negative impact of short-term oversupply.[256]

Third, the EU permits the use of exceptional measures (also known as crisis measures) to address "sudden and unforeseeable" risks in agricultural markets, including, for example, "market instability, price volatility, or the consequences of restrictions linked to animal and plant health."[257] Between 2014 and 2023, sixty-three exceptional measures were adopted.[258] The specific allocation of budget for each measure is mostly unknown, but the EU implemented fifteen measures for the pork and poultry sectors, one for the beef and veal sector, one for the livestock sector in general, and eighteen for the dairy sector, addressing various crises and challenges, such as the Russian ban, COVID-19, market imbalance, and animal health.[259]

The assessment of market measures suggests that the livestock sector is a top priority for public support in the EU. Animal-based foods make up more than half of both lists of the protected agricultural sectors under first two market measures, and over half of the exceptional measures have been used to address risks in the livestock sector.[260]

4. Support for Feed Production

Similar to the US, the EU also provides financial support for feed production, although, as Professor Paul Behrens points out, feed production in the EU is "somewhat 'invisible' to the public," given that people only "see fields full of plants without considering their purpose is to feed animals."[261] Recent research shows that in the EU, a greater budget is allocated to feed production (€21 billion or $23 billion) compared to

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[255] *Id.*

[256] *Id.*

[257] *Report from the Commission to the European Parliament and the Council: The Use of Crisis Measures Adopted Pursuant to Articles 219 to 222 of the CMO Regulation*, at 1, COM (2024) 12 final (Jan. 22, 2024), https://eur-lex.europa.eu/resource.html?uri=cellar:b1e3336a-b916-11ee-b164-01aa75ed71a1.0003.02/DOC_1&format=PDF [https://perma.cc/VVH7-87LD].

[258] *Id.* at 5.

[259] *Annexes to the Report from the Commission to the European Parliament and the Council: The Use of Crisis Measures Adopted Pursuant to Articles 219 to 222 of the CMO Regulation*, COM (2024) 12 final (Jan. 22, 2024).

[260] *Id.*; *Report from the Commission to the European Parliament and the Council*, *supra* note 259.

[261] Samuel Hanegreefs, *How EU Farm Subsidies Favour High-Emission Animal Products*, LEIDEN UNIVERSITY (Apr. 4, 2024), https://www.universiteitleiden.nl/en/news/2024/04/how-eu-farm-subsidies-favour-high-emission-animal-products [https://perma.cc/3VA3-K75Z].

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animal production itself (€18 billion or $20 billion).[262] The CAP support for animal-based foods approximately doubles when including subsidies for animal feed.[263] For example, beef subsidies are estimated to rise from €0.71/kg to €1.42/kg when feed subsidies are factored in.[264] Access to cheap animal feed encourages livestock farmers to stay in business, driving overproduction and leading to climate and environmental problems.

E. SUBSIDIES IN THE UK

In the UK, agriculture, food, and environment are devolved (local) matters over which the government of the UK (for England) and the governments of the UK's three devolved nations (i.e., Wales, Scotland, and Northern Ireland) have jurisdiction.[265] However, the financing of agricultural subsidies and trade (including agricultural trade) are matters that fall under the centralized powers of the UK government.[266] That means, technically, each government has the authority to decide on their own agricultural policies; however, practically, they still rely on the central body, the UK government, to provide the necessary funds to implement their policies. While this distribution of powers often creates tension between the central government and governments of the devolved nations,[267] they generally remain aligned in their fundamental approaches to agri-food subsidies, as the UK's nearly five decades of EU membership led to a long-term impact from the CAP on the UK as a whole and on its

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[262] *Id.*

[263] Kortleve et al., *supra* note 43, at 288.

[264] *Id.*

[265] *See generally,* David Torrance, HOUSE OF COMMONS LIBR., *Introduction to Devolution in the United Kingdom* (2024), https://researchbriefings.files.parliament.uk/documents/CBP-8599/CBP-8599.pdf [https://perma.cc/DEC8-A453]; Ludivine Petetin, *Setting the Path for UK and Devolved Agriculture*, *in* THE GOVERNANCE OF AGRICULTURE IN POST-BREXIT UK (Irene Antonopoulos et al., eds.), 40, 40–62 (2022).

[266] *Farmers' £3 Billion Support Confirmed in Time for 2020*, HM TREASURY (Dec. 30, 2019), https://www.gov.uk/government/news/farmers-3-billion-support-confirmed-in-time-for-2020 [https://perma.cc/9HJP-RFJC] (noting that the UK Government provides the support); Sarah Coe & Elise Uberoi, *Farm Funding: Implementing New Approaches*, HOUSE OF COMMONS LIBRARY RESEARCH BRIEFING (Mar. 15, 2023), https://researchbriefings.files.parliament.uk/documents/CBP-9431/CBP-9431.pdf [https://perma.cc/8PWL-6F93] (noting that "[a]gricultural policy is a devolved matter, so the four parts of the UK have developed their own policies." However, the UK Government is responsible for "introducing payments for farmers to provide public goods such as environmental and animal welfare improvements.").

[267] Petetin, *supra* note 265, at 40-62.

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nations.[268] The following section will only examine England and its agricultural policies, as it provides key insights into post-Brexit policy shifts across the UK.

In England, the Agriculture Act 2020 provided a politically motivated departure from the CAP and an overarching legal framework for its agricultural policies.[269] The Environmental Land Management Scheme (ELMS) is the key instrument that implements the Act's two main objectives:[270] encouraging food production by local producers and increasing productivity, and supporting sustainable agriculture and farming practices.[271] Consisting of three main schemes—the Sustainable Farming Incentive, Countryside Stewardship, and Landscape Recovery[272]—the ELMS made a strategic shift from making direct payments to farmers to funding those providing "environmental goods and services alongside food production."[273] As the Department for Environment, Food & Rural Affairs summarized, the post-Brexit agricultural policies in England aim to be "underpinned by payment of public money for the provision of public goods."[274] Moreover, the ELMS offers "one-off grants to support farm productivity, innovation, research and development" that align with its sustainability goals.[275]

Despite these efforts to improve sustainability, England's post-Brexit agri-food policies have yet to make a fundamental shift from the CAP. Its implementation still focuses on procedural compliance—farmers actions (the do's and don'ts)—rather than on achieving tangible climate and environmental outcomes—public goods—or other beneficial results

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[268] *See generally*, LUDIVINE PETETIN & MARY DOBBS, BREXIT AND AGRICULTURE (2022).

[269] *See* Agriculture Act 2020, c. 21, §§ 1(1), 1(2) & 1(4) (UK).

[270] *See* DEP'T FOR ENV'T FOOD & RURAL AFFS., POLICY PAPER: ENVIRONMENTAL LAND MANAGEMENT (ELM) UPDATE: HOW GOVERNMENT WILL PAY FOR LAND-BASED ENVIRONMENT AND CLIMATE GOODS AND SERVICES (2023) (UK) [hereinafter ELM UPDATE], https://www.gov.uk/government/publications/environmental-land-management-update-how-government-will-pay-for-land-based-environment-and-climate-goods-and-services/environmental-land-management-elm-update-how-government-will-pay-for-land-based-environment-and-climate-goods-and-services [https://perma.cc/9G2Z-DJZR].

[271] *See* Agriculture Act 2020, c. 21, §§ 1(1), 1(2) & 1(4) (UK).

[272] DEP'T FOR ENV'T FOOD & RURAL AFFS., THE PATH TO SUSTAINABLE FARMING: AN AGRICULTURAL TRANSITION PLAN 2021 TO 2024, 31–35, 40–41 (2020) (UK); ELM UPDATE, *supra* note 270.

[273] ELM UPDATE, *supra* note 270.

[274] Department for Environment Food & Rural Affairs, *Health and Harmony: The Future for Food, Farming, and the Environment in a Green Brexit*, 2018, Cm. 9577 at 32 [hereinafter Health and Harmony].

[275] ELM UPDATE, *supra* note 270.

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for the agricultural sector and rural communities.[276] Furthermore, the subsidy schemes under the ELMS continue to maintain the status quo as already existed under the CAP, suggesting that the emphasis placed on meat subsidies remains the same.[277]

England also introduced a suite of programs that directly benefit the livestock sector. For example, the Farming Investment Fund provides small grants to encourage sustainable meat production in England.[278] Under the Farming Investment Fund, the Slurry Infrastructure grant is provided to pig, beef, and dairy farmers who seek to upgrade their slurry storage systems.[279] The Calf Housing for Health and Welfare grant is also available to help improve the housing conditions for calves up to six months old to enhance their health and welfare.[280] Adding Value grants are provided to help farmers process and add value to primary agricultural products, including meat.[281] Furthermore, the Animal Health and Welfare Pathway—a partnership between farmers, vets, the wider industry, and the supply chain, launched in 2023—finances projects that specifically "protect[] and enhance[] farm animal health and welfare."[282]

In spite of England's strong pledge to replace the CAP with a new framework more focused on improving sustainability,[283] the implementation of its agri-food policies continues to mirror the CAP's approach.[284] The ongoing support for the livestock sector underscores a

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[276] *See generally* Christian Busse et al., *Die Wertschöpfungskette im Agrar- und Lebensmittel-bereich zwischen Selbststeuerung und staatlicher Re-gulierung [The Value Chain in the Agricultural and Food Sector between Self-Management and State Regulation]*, 9 CEDR J. Rural L. 10 (2024) (Ger.).

[277] *See generally* Mark Tilzey, *Ill Fares the Land: Confronting Unsustainability in the U.K. Food System through Political Agroecology and Degrowth*, 13 Land 1 (2024).

[278] *See Rural* Payments Agency & Department for Environment Food & Rural Affairs, *Farming Investment Fund (FIF)*, GOV.UK (May 14, 2024), https://www.gov.uk/government/collections/farming-investment-fund-fif#improving-farm-productivity-grant [https://perma.cc/CM8Z-2FZE].

[279] *Id.*

[280] *Id.*

[281] Rural Payments Agency, *Guidance: About the Adding Value Grant Round 1, Who Can Apply and What the Grant Can Pay For (Closed),* GOV.UK (Feb.18, 2024), https://www.gov.uk/government/publications/adding-value-grant-for-farmers-to-improve-crops-or-livestock/about-the-adding-value-grant-who-can-apply-and-what-the-grant-can-pay-for [https://perma.cc/92RT-A83Q].

[282] Department for Environment Food & Rural Affairs, *Policy Paper: Animal Health and Welfare Pathway,* GOV. UK (July 12, 2024), https://www.gov.uk/government/publications/animal-health-and-welfare-pathway/animal-health-and-welfare-pathway [https://perma.cc/H794-MCPF].

[283] *See generally* U.K. Department for Environment Food & Rural Affairs*, supra* note 274 (discussing England's plan to shift away from the CAP towards a more sustainable future).

[284] *See* Petetin & Dobbs, *supra* note 268, at 259.

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reluctance to fully shift away from the traditional practices that have long characterized agri-food policies in the region.[285]

F. SUMMARY

In summary, the livestock sectors in the three case studies—the US, EU, and UK—benefit greatly from two types of subsidies: (1) those directly supporting animal agriculture, and (2) those supporting feed production and other associated areas, which provides livestock producers with continued access to cheap feed and other benefits.[286] While these direct and indirect meat subsidies have promoted intensive livestock farming and increased meat production, they have resulted in detrimental effects on the planet and human well-being. There are compelling reasons to reform these subsidy schemes. However, as noted above, governments in the US, EU, and UK have been reluctant to scale back their support for this sector. In the US, the USDA and the Environmental Protection Agency argue, "a strong livestock industry . . . is essential to the Nation's economic stability, the viability of many rural communities, and the sustainability of a healthful and high quality food supply for the American public."[287] Although the EU and UK have remained relatively silent on this matter, their consistent support for the livestock sector indicates that they share a similar view as their American counterpart. In light of this, this Article argues, while the USDA and Environmental Protection Agency are not entirely wrong in their assessment, they overstate the importance of the livestock sector and fail to take effective action to address the sector's detrimental impacts on the environment and food security. The next section investigates the impacts of meat subsidies on the four key elements of the right to food, with a particular emphasis on the fourth element of this right: sustainability.

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[285] *See generally* Tilzey, *supra* note 277.

[286] Karimi, *supra* note 28, at 362; Maggie Fox, *Do U.S. Food Subsidies Make People Fat?*, NBC News (July 5, 2016, 2:04 PM), https://www.nbcnews.com/health/health-news/do-u-s-food-subsidies-make-people-fat-n604091 [https://perma.cc/JNT4-LSWY].

[287] U.S. Department of Agriculture & U.S. Environmental Protection Agency, *Unified National Strategy for Animal Feeding Operations*, § 1.1 (1999).

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III. ASSESSING THE IMPACT OF MEAT SUBSIDIES ON THE FOUR KEY ELEMENTS OF THE RIGHT TO FOOD

The following section examines how subsidy schemes in the US, EU, and UK impact the four key elements of the right to food.

A. AVAILABILITY AND ACCESSIBILITY

As noted in Part I, availability and accessibility are the two most pivotal elements of the right to food.[288] Availability requires that everyone has access to an adequate quantity of food at all times, through production or purchase on the market.[289] Accessibility emphasizes individuals' physical and economic access to adequate food and nutrition.[290] Given that physical access concerns the ability of individuals to obtain food without physical barriers and is largely unrelated to meat subsidies, the following section will only focus on economic access, along with the first element of the right to food: availability.

Meat subsidies in the US, EU, and UK have led to improved availability and accessibility of meat products within their jurisdictions. Specifically, below-cost animal feed, excessive direct subsidies, and other public support measures have boosted profit margins for meat producers, which in turn encourages increased production[291] and makes meat more available and affordable for local consumers.[292] While surpluses, when available, are exported to other countries, they have yielded somewhat mixed results in the context of global food availability and accessibility.

At the international level, as a result of the generous public support via subsidy,[293] both the US and the EU have become the world's

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[288] Ying Chen & Tarisa Yasin, *Navigating the Battlefield of Hunger During Armed Conflicts: Obligations*, Obstacles, and Solutions, 39 AM. U. INT'L L. REV. 219, 225 (2024).

[289] D. Moyo, *The Future of Food: Elements of Integrated Food Security Strategy for South Africa and Food Security Status in Africa*, 101 AM. SOC'Y INT'L L. PROC. 103, 103 (2007); *see* Francesco Burchi & Pasquale De Muro, *From Food Availability to Nutritional Capabilities: Advancing Food Security Analysis*, 60 FOOD POLICY 10, 11 (2016); *see also* FAO, *Food Security*, 2 Policy Brief 1, 1–2 (2006).

[290] Fact Sheet No. 34, *supra* note 70, at 2.

[291] *See* Sewell, *supra* note 185, at 314.

[292] *See* Kammer, *supra* note 114, at 27.

[293] R. Quentin Grafton et al., *Towards Food Security by 2050*, 7 FOOD SEC. 179, 180 (2015) (noting that "Agricultural policies have a long history of motivating inefficient production, leading to overproduction in some regions. . .").

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major agri-food exporters.[294] In 2023, the US exported agricultural commodities worth $174 billion,[295] with animal-based foods—including pork, beef, poultry meat, and dairy products—accounting for 18 percent of the export, and animal feed—including corn and soybeans[296]—representing 23.5 percent of the total export value.[297] The EU's agri-food exports reached €228.6 billion ($251 billion) in the same year.[298] However, the EU's exports are predominantly driven by cereal preparations and milling products, dairy products, as well as wine and wine-based products.[299] In the meat sector, the EU is the world's second biggest pork producer and the largest pork exporter,[300] exporting approximately four million tons every year.[301] However, the EU is not a leading exporter of beef and chicken,[302] despite being the world's fourth largest beef producer (11 percent of global beef production),[303] and the

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[294] Carlie Leoni & Kenneth Anspach, *Killing Factory farm Funding to Resuscitate the World Food Economy*, 35 NAT. RES. & ENV'T 10, 10 (2021) (noting that the American agricultural sector is an export powerhouse).

[295] USDA, *U.S. Agricultural Trade at a Glance*, Economic Research Service (Jan. 7, 2025), https://www.ers.usda.gov/topics/international-markets-u-s-trade/u-s-agricultural-trade/u-s-agricultural-trade-at-a-glance/#:~:text=As%20a%20result%2C%20U.S.%20agricultural,in%20global%20supply%20and%20demand [https://perma.cc/5C8S-V2EB].

[296] *See also* Matthew Howden & Kirk Zammit, *United States and Australian Agriculture—A Comparison*, 3 AUSTL. BUREAU OF AGRIC. & RES. ECON. & SCIS [ABARES] 1, 3–4 (2019) (noting that "US crop exports are dominated by soybeans and corn. . ." which are mostly "used as animal feed in countries like China and Mexico. . .").

[297] USDA Foreign Agricultural Service, *2023 United States Agricultural Export Yearbook 1 (2023).*

[298] European Commission, *EU Agri-Food Trade Achieved A Record Surplus in 2023,* AGRIC. & RURAL DEV. (Apr. 5, 2024), https://agriculture.ec.europa.eu/news/eu-agri-food-trade-achieved-record-surplus-2023-2024-04-05_en#:~:text=EU%20agri%2Dfood%20exports%20reached,%25%20(%E2%82%AC51.3%20billion [https://perma.cc/5TUK-YZB4].

[299] Directorate General Agriculture and Rural Development, *Monitoring EU Agri-Food Trade: Developments in November 2023*, EUROPEAN COMMISSION 5 (Feb. 2024) (The key drivers of E.U.'s agricultural exports, as the European Commission notes, include "cereal preparations and milling products (€24.2 billion; 11% of EU exports), dairy products (€19.6 billion; 9% of EU exports) and wine and wine-based products (€17.6 billion; 8% of EU exports).).

[300] *Pigmeat,* EUROPEAN COMMISSION, https://agridata.ec.europa.eu/extensions/DataPortal/pigmeat.html [https://perma.cc/NJX3-5R7D] (last visited Oct. 12, 2024).

[301] *Id.*

[302] Vincent Chatellier, *Review: International Trade in Animal Products and the Place of the European Union: Main Trends Over the Last 20 Years*, 15 ANIMAL 1, 1 (2021).

[303] Foreign Agricultural Service, *Production – Beef*, USDA, https://fas.usda.gov/data/production/commodity/0111000 [https://perma.cc/VSJ2-AL4H] (last visited Oct. 12, 2024).

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fourth largest chicken producer.[304] As for the UK, it is not a major agri-food exporter. In fact, it ranks as the world's fifth largest agricultural importer by value.[305] However, given that 70 percent of its land is used for agricultural production—mainly for beef, pork, lamb, poultry, dairy, and grains (wheat, barley, and oats)[306]—it still exports a modest amount of meat products. For example, the UK exports approximately 80,000 tons of sheep meat every year, which is valued at about £500 ($650) million.[307] In 2023, it also exported about 134,000 tons of beef and veal, and 298,312 tons of pig meat products.[308]

While the UK contributes marginally to global food security through exports,[309] the other two case studies, especially the US, have played a critical role in meeting growing global demand for meat.[310] However, the massive production, consumption, and export of animal-based foods and animal feed, supported by heavy subsidies, has led to a more serious problem. Critical resources, such as land, water, labor, and capital (including subsidies), have been directed towards an unsustainable sector—the livestock sector—which has diminished the potential for producing more resource-efficient food crops for human consumption, compromising food availability and accessibility in a broad sense.[311] For example, agricultural scientists Dr. Akila Wijerathna-Yapa and Dr. Ranjith Pathirana assert that meat-centric diets divert substantial farmland to produce animal feed, which could otherwise be used for growing food crops for human consumption.[312] Dr. Niki A. Rust et al. also note that "if

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[304] Marie-Laure Augère-Granier, *The EU Poultry Meat and Egg Sector: Main Features, Challenges and Prospects*, EUROPEAN PARLIAMENT THINK TANK 16 (Nov. 26, 2019).

[305] Jeremy Jelliffe et al., *United Kingdom Agricultural Production and Trade Policy Post-Brexit*, USDA ECONOMIC RESEARCH SERVICE 17 (Feb. 2023).

[306] Department for Environment, Food and Rural Affairs et al., *Agriculture in the United Kingdom 2023*, 9–14 (2024) (UK).

[307] *Meat Export,* Agriculture and Horticulture Development Board https://ahdb.org.uk/exports/meat#:~:text=HMRC%20and%20Defra-,Lamb,valued%20at%20about%20%C2%A3500m [https://perma.cc/FGG8-LBPC] (last visited Oct. 12, 2024) (UK).

[308] *Id.*

[309] Department for Environment, Food & Rural Affairs, *Ministerial Role: Minister of State (Minister for Food Security and Rural Affairs)*, GOV.UK https://www.gov.uk/government/ministers/minister-of-state—189 [https://perma.cc/X2HM-74SL] (last visited Oct. 12, 2024) (the UK Government has now for the first time a Minister of State for Food Security (and Rural Affairs)).

[310] Delgado, *supra* note 35, at 3907S–10S (discussing the increasing demand for meat in the developing countries).

[311] Chenyang, *supra* note 21, at 10345.

[312] Wijerathna-Yapa & Pathirana, *supra* note 7, at 10.

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the crop production currently used for animal feed (and other non-food uses) was instead directed at human consumption, it would create 70% more calories, which could feed up to 4 billion more people."[313] Furthermore, Professor Lingxi Chenyang and Trevor J. Smith assess how reducing meat consumption in the US, the world's top meat producer and exporter, could affect global food availability. Chenyang estimates that "shifting U.S. demand for beef to plant-based proteins alone can feed an additional 190 million people."[314] Smith draws a similar conclusion but from a broader perspective, noting that "if U.S. consumption of grain-fed animal products were cut by 50%, calorie availability would increase by enough to feed an additional 2 billion people."[315] Similarly, in England, the National Food Strategy suggests that a reduction in meat consumption by 30 percent (alongside other measures) would enable the UK to produce the "same amount of calories from 30% less land."[316]

As for economic access, as noted above, overproduction of meat restricts the production of more resource-efficient food crops for human consumption,[317] which inevitably drives up the prices of these crops and impairs overall food affordability.[318] This is evidenced by the artificially high prices for specialty crops such as vegetables and fruits in our case studies.[319] Moreover, Wijerathna-Yapa and Pathirana's research shows that long-term food prices are often driven up by five key factors, including, "high fuel prices, climate change, government subsidies, World Trade Organization limits on stockpiles, and relying on animal-based products."[320] The case studies of the US, EU, and UK demonstrate that the livestock sector is directly associated with three of these five factors: it is supported by government subsidies and driven by the growing demand for animal-based products, and it contributes to and is affected by climate change and other environmental problems. Therefore, it can be inferred

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[313] Niki A. Rust et al., *How to Transition to Reduced-Meat Diets that Benefit People and the Planet,* 718 SCI. TOTAL ENV'T 1, 2 (2020).

[314] Chenyang, *supra* note 21, at 10345; *see also* Gideon Eshel et al., *Environmentally Optimal, Nutritionally Aware Beef Replacement PLANT-BASED DIETS,* 50 ENV'T. SCI. & TECH. 8164-68 (2016).

[315] Smith, *supra* note 17, at 51.

[316] Henry Dimbleby, *National Food Strategy: The Plan*, 109 (2021).

[317] Chenyang, *supra* note 21, at 10345.

[318] Kammer, *supra* note 114, at 21 (noting that "The relative price of nonsubsidized (and often healthier) alternatives to these products is made artificially high. The resulting reduced market share for nonsubsidized alternatives foods more available.").

[319] *See, e.g.*, Kortleve et al., *supra* note 43, at 21; Kammer, *supra* note 114, at 21.

[320] Wijerathna-Yapa & Pathirana, *supra* note 7, at 10.

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that the livestock sector is a contributing factor to limiting economic access to food.

B. ADEQUACY

Adequacy, the third element of the right to food, addresses both food safety and the need to satisfy individuals' dietary and cultural requirements.[321] Nevertheless, when assessing meat subsidies' impact on adequacy, the focus is placed on dietary needs, as it is a primary concern and a subject of controversy.

On the one hand, subsidies in the US, EU, and UK promote the production of animal-based foods, which addresses consumers' dietary needs to increase their protein and other nutrients intake. As Professor Emily Yates-Doerr summarizes, meat plays a crucial role in satisfying the human body's "intrinsic nutritional needs."[322] It provides high quality protein that contains "all essential amino acids and . . . highly bio available minerals and vitamins."[323] It is also an important source of Vitamin B12 and iron, nutrients that are "not readily available in vegetarian diets."[324] From a cultural perspective, and as noted above, subsidies that support the livestock sector also align with the cultural preferences for meat in the US, EU, UK, and beyond, as meat has become an important component of modern diets.

On the other hand, scientific evidence shows that meat-centric diets are not healthy.[325] High levels of meat consumption can lead to a range of chronic health problems,[326] such as "obesity, diabetes, some common cancers, and heart disease."[327] Furthermore, meat consumption is associated with lapses in food safety. For example, contamination with harmful bacteria or improper handling practices can lead to foodborne illnesses.[328]

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[321] Chen & Yasin, *supra* note 288, at 225.

[322] Emily Yates-Doerr, *Meeting the Demand for Meat?*, 28 ANTHROPOLOGY TODAY 11, 12 (2012).

[323] *Id.*

[324] *Id.*

[325] Méndez Benítez, *supra* note 6, at 49.

[326] Alejandro D. González et al., *Protein Efficiency Per Unit Energy and Per Unit Greenhouse Gas Emissions: Potential Contribution of Diet Choices to Climate Change Mitigation*, 36 FOOD POL'Y 562, 563 (2011).

[327] Donahue, *supra* note 18, at 11117; *see also* Méndez Benítez, *supra* note 6, at 49.

[328] Jarosz, *supra* note 36, at 2074.

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While evidence-based nutritional guidelines[329] have long advocated for a healthy diet that is high in plant-based foods and low in meat,[330] only 12.2 percent of Americans consume the daily recommended amount of fruit and less than 10 percent consume the daily recommended amount of vegetables.[331] Similarly, 33 percent of the EU population do not "consum[e] any fruit or vegetables daily," and only 12 percent meet the daily vegetable and fruit intake requirements.[332] The UK, on the contrary, has performed significantly better in this regard. On average, individuals in the UK consume 314 grams of fruit and vegetables daily, falling just 86 grams short of the recommended amount (400g/day).[333] However, the National Food Strategy still observed an increase in obesity rate for the adult population in the UK, rising from approximately 17 percent in 1995 to around 30 percent in 2020, with projections indicating a further increase by 2035.[334] The consumption of red meat and processed meat has been implicated as a key risk factor for obesity.[335]

Meat subsidies have a double-edged effect on meeting individuals' dietary needs. They support the production of animal-based foods, which are good sources of protein and other essential nutrients for humans;[336] however, they also encourage unhealthy diets that pose serious health risks.[337] Professor Debra L. Donahue argues that meat-centric diets create more "nutritional problems . . . than solving them."[338] In two out of

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[329] The National Health Service England, *Fruit and Vegetable Consumption*, https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-england-additional-analyses/ethnicity-and-health-2011-2019-experimental-statistics/fruit-and-vegetable-consumption [https://perma.cc/43ZY-872A] (last visited Oct. 12, 2024) ("The World Health Organization recommends that adults eat at least 400g of fruit and vegetables a day in order to promote general health and reduce the risk of non-communicable diseases."); Wisdom Dogbe & Cesar Revoredo-Giha, *Nutritional and Environmental Assessment of Increasing the Content of Fruit and Vegetables in the UK Diet*, 13 SUSTAINABILITY 1, 1 (2021).

[330] Donahue, *supra* note 18, at 11117.

[331] Gruneberg, *supra* note 113, at 336.

[332] Eurostat, *How Much Fruit and Vegetables Do You Eat Daily*? (Jan. 4, 2022), https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220104-1#:~:text=In%202019%2C%201%20in%203,of%20fruit%20and%20vegetables%20daily [https://perma.cc/U4B8-MMVE].

[333] Dogbe & Revoredo-Giha, *supra* note 329, at 2.

[334] National Food Strategy, *supra* note 316, at 28.

[335] Laura Sares-Jäske et al., *Meat Consumption and Obesity: A Climate-friendly Way to Reduce Health Inequalities,* 3 PUB. HEALTH CHALLENGES 1, 1–14 (2024).

[336] Donahue, *supra* note 18, at 11117 (citing Alejandro D. González et al., *Protein Efficiency Per Unit Energy and Per Unit Greenhouse Gas Emissions: Potential Contribution of Diet Choices to Climate Change Mitigation*, 36 FOOD POL'Y 562, 569 (2011)).

[337] *Id.; see also* Méndez Benítez, *supra* note 6, at 49.

[338] Donahue, *supra* note 8*.,* at 11117.

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the three case studies, individuals consume unsustainable amounts of animal-based foods with limited vegetable and fruit intake, putting them at high risk of chronic health problems. Healthcare costs associated with meat consumption are high, not only in the three case studies, but also globally, as a result of increased meat consumption;[339] they also have significant repercussions for taxpayers.[340]

C. SUSTAINABILITY

In addition to the availability, accessibility, and adequacy problems discussed above, the greatest concerns with meat subsidies in the US, EU, and UK are their detrimental impacts on agricultural sustainability. This poses a serious threat to long-term food security, not only locally but also globally, given that the climate and environmental effects transcend anthropogenic borders[341] and many countries rely on food imports.[342]

First, as noted, animal agriculture is a key source of GHG emissions and has contributed to the changing climate and extreme weather events over the past decades.[343] In the US, the livestock sector—

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[339] Kammer, *supra* note 114, at 2–3. For healthcare costs at the global level, see Barnard N.D. et al., *The Medical Costs Attributable to Meat Consumption*, 24 PREVENTIVE MED. 646, 646–55 (1995); Marco Springmann, et al., *Health-motivated Taxes on Red and Processed Meat: A Modelling Study on Optimal Tax Levels and Associated Health Impacts*, 13 PLOS ONE 1, 1–16 (2018).

[340] Healthcare costs affect taxpayers through direct taxation or indirect costs associated with public healthcare systems. E.g., the U.K. provides free universal healthcare and the funding mainly comes from general taxation and National Insurance Contributions. *See, e.g.* Simon Sawhney et al., *Care Processes and Outcomes of Deprivation Across the Clinical Course of Kidney Disease: Findings From A High-Income Country with Universal Healthcare*, 38 NEPHROL DIAL TRANSPLANT 1170, 1172 (2023); *see also* The King's Fund, *The NHS Budget and How It Has Changed* (Jun. 18, 2024), https://www.kingsfund.org.uk/insight-and-analysis/data-and-charts/nhs-budget-nutshell#:~:text=the%20money%20go%3F-,How%20is%20the%20NHS%20funded%3F,as%20prescriptions%20and%20dental%20treatment [https://perma.cc/J9VK-DKNC]; David U. Himmelstein & Steffie Woolhandler, *The Current and Projected Taxpayer Shares of US Health Costs*, 106 AM. J. PUBLIC HEALTH 449, 449-52 (2016) (discussing the U.S. healthcare funding systems).

[341] Ingrid Boas et al., *The Bordering and Rebordering of Climate Mobilities: Towards A Plurality of Relations*, 19 MOBILITIES 521, 521–536 (2024) ("Climate change does not respect anthropogenic borders, nor are borders themselves as defined in international law necessarily immune from climate change impacts and may change as a result.").

[342] Veronika Yu. Chernova & Vladyslava I. Noha, *A Study of the Characteristics of Food Import Dependence of the Countries,* 8 AMAZONIA INVESTIGA 484, 484–492 (2019).

[343] *See* Xiaoming Xu, et al., *Global Greenhouse Gas Emissions from Animal-based Foods Are Twice Those of Plant-Based Foods*, 2 NATURE FOOD, 724, 724–732 (2021); *see* Méndez Benítez, s*upra* note 6, at 63; Livestock's Long Shadow, *supra* note 18, at xx; Daisy Dunne, et al., Interactive: What Is the Climate Impact of Eating Meat and Dairy? (Sept. 14, 2020), CARBON BRIEF,

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a major beneficiary of the Farm Bill—is "the number one source of methane emissions in this country;" it is responsible for approximately "80% of all the agricultural emissions."[344] In the EU, animal-based foods subsidized by the CAP account for 84 percent of its agri-food-related emissions.[345] As for the UK, while the level of the livestock emissions are reported to be relatively low,[346] its beef industry still produces a carbon footprint equivalent to the EU average.[347]

Second, the livestock sector is also "the single largest anthropogenic user" of land resources, accounting for "70 percent of all agricultural land" in the world[348] and with higher percentages observed in developed economies such as the US, EU and UK. In the US, 87 percent of agricultural land is used for intensive livestock production.[349] It is also important to note that 80 percent of the livestock-related land is concentrated in the hands of just a few "large companies who receive the lion's share of Farm Bill subsidies."[350] In Europe, more than 71 percent of the EU's agricultural land[351] and 85 percent of the UK's agricultural land is dedicated to livestock and feed production.[352] Furthermore, modern

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https://interactive.carbonbrief.org/what-is-the-climate-impact-of-eating-meat-and-dairy/ [https://perma.cc/HB6A-LWS5]; Laura E. Jarvis, *Lessons from Land to Sea: An Informed Approach to Offshore Aquaculture Regulation*, 102 B.U. L. REV. 1083, 1086–87 (2022).

344 Smith, *supra* note 17, at 33.

345 Hanegreefs, *supra* note 261.

346 *Official Statistics Agro-climate Report 2023*, GOV.UK (Jan. 26, 2024), https://www.gov.uk/government/statistics/agri-climate-report-2023/agri-climate-report-2023 [https://perma.cc/U44Z-6TQT].

347 The Beef Site, *UK Beef Carbon Footprint is EU Average* (Feb. 22, 2011), https://www.thebeefsite.com/news/33676/uk-beef-carbon-footprint-is-eu-average [https://perma.cc/5TS2-GM22].

348 Livestock's Long Shadow, *supra* note 18, at xxi.

349 Rafael Woldeab, *Industrialized Meat Production and Land Degradation: 3 Reasons to Shift to a Plant-Based Diet* (Dec. 19, 2019), https://populationeducation.org/industrialized-meat-production-and-land-degradation-3-reasons-to-shift-to-a-plant-based-diet/ [https://perma.cc/J8M7-56TD]; Gruneberg, *supra* note 113, at 332 (noting that 70% of all crops grown in the U.S., primarily corn and soy, are used as feed for livestock).

350 Gruneberg, *supra* note 113, at 332.

351 Greenpeace European Unit, *Feeding the Problem: The Dangerous Intensification of Animal Farming in Europe* (Feb. 12, 2019), https://www.greenpeace.org/eu-unit/issues/nature-food/1803/feeding-problem-dangerous-intensification-animal-farming/ [https://perma.cc/B38U-CG8C].

352 World Wildlife Fund, *Press Release: Transform UK Farmland to Boost Food Resilience and Tackle Nature Crisis – WWF* (July 1, 2022), https://www.wwf.org.uk/press-release/transform-uk-farmland-boost-food-resilience-tackle-nature-crisis#:~:text=The%20latest%20report%20in%20WWF's,total%20land%20use%20for%20agriculture [https://perma.cc/QH86-5C7V].

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animal agriculture drives "unprecedented levels of deforestation,"[353] which exacerbates climate change as the carbon stored in the vegetation is "released back into the atmosphere as carbon dioxide."[354] It also leads to more homogeneous agricultural landscapes and biodiversity loss.[355]

Third, agriculture utilizes 70 percent of global freshwater withdrawal,[356] with livestock farming straining this critical natural resource through high demand for direct water consumption, feed crop irrigation, and waste management,[357] as well as through water pollution.[358] Research reveals that "the water footprint of any animal product is between 2.4 and 33 times larger than the water footprint of crop products with equivalent nutritional value."[359] Particularly, beef has the highest water footprint of all meats, "requiring a whopping 1,800-2,500 gallons of water per pound,"[360] compared to food crops which only need fifteen to a few hundred gallons per pound.[361] Moreover, livestock produces large volumes of manure,[362] which, if not properly managed, can contaminate

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[353] Sewell, *supra* note 185, at 310 (noting that "forests are cleared to make way for livestock grazing and growing crops for animal feed").

[354] Charles Palmer et al., *What is the Role of Deforestation in Climate Change and How Can 'Reducing Emissions from Deforestation and Degradation' (REDD+) Help?* (Feb. 2023), LONDON SCH. ECON. EXPLAINERS, https://www.lse.ac.uk/granthaminstitute/explainers/whats-redd-and-will-it-help-tackle-climate-change/#:~:text=When%20deforestation%20occurs%2C%20much%20of,Africa%2C%20followed%20by%20South%20America [https://perma.cc/FXK5-8NAM]; *see generally,* Ross W. Gorte & Pervaze A. Sheikh, CONG. RSCH. SERV., R41144 DEFORESTATION AND CLIMATE CHANGE (2010).

[355] Wijerathna-Yapa & Pathirana, *supra* note 7, at 12; *see also* FAO, *Nutrition-Sensitive Agriculture and Food Systems in Practice: Options for Intervention* (2017), https://openknowledge.fao.org/server/api/core/bitstreams/7055154c-1ac0-494a-a566-a0b1fbae10f9/content [https://perma.cc/9BRE-P73Z].

[356] FAO, *Water Use in Livestock Production Systems and Supply Chains: Guidelines for Assessment* (2019), https://openknowledge.fao.org/server/api/core/bitstreams/fd15000e-d78f-42db-a050-bee91fce8d84/content [https://perma.cc/UW5K-8DR7].

[357] A.C. Schlink et al., *Water Requirements for Livestock Production: A Global Perspective*, 29 REVUE SCIENTIFIQUE ET TECHNIQUE OFFICE INTERNATIONAL DES EPIZOOTIES 603, 603–619 (2010).

[358] *See e.g.,* Krishna Prasad Woli et al., *Magnitude of Nitrogen Pollution in Stream Water Due to Intensive Livestock Farming Practices,* 48 SOIL SCI. & PLANT NUTRITION 883, 883–887 (2002).

[359] Christine Parker et al., *The Promise of Ecological Regulation: The Case of Intensive Meat*, 59 JURIMETRICS J. 15, 19–20 (2018); *see also* Arianna Di Paola et al., *Human Food Vs. Animal Feed Debate: A Thorough Analysis of Environmental Footprints*, 67 LAND USE POL'Y 652, 655 (2017); Mesfin M. Mekonnen & Arjen Y. Hoekstra, *A Global Assessment of the Water Footprint of Farm Animal Products,* 15 ECOSYSTEMS 401, 413 (2012) (noting that "29 percent of the total water footprint of the agricultural sector in the world is related to the production of animal products").

[360] Sewell, *supra* note 185, at 310.

[361] *Id.*

[362] Walton & Jaiven, *supra* note 125, at 10486.

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water systems through surface runoff or infiltration.[363] In fact, manure is a major source of nitrogen and phosphorus-nutrients that cause eutrophication—a process that leads to excessive growth of algae and other aquatic plants, oxygen depletion in water, and ecosystem disruptions.[364] Adrian Leip et al.'s research shows that animal farming accounts for 73 percent of water pollution from the EU agricultural sector.[365] Similarly, in the US, livestock manure is one of the "primary stressors to water quality;"[366] surface water and groundwater supplies in agricultural areas across the country are contaminated by livestock waste.[367] In the UK, intensive livestock agriculture is the key driver of river pollution in England; it is also responsible for the ecological collapse of several rivers in Wales and Northern Ireland.[368]

Fourth, modern animal agriculture also raises concerns pertaining to sustainability issues in a broader sense, such as the prophylactic use of antibiotics in the livestock industry and its impact on animal and human health (especially antimicrobial resistance),[369] and the decrease in livestock genetic diversity as a result of intensive selective breeding to optimize specific traits in livestock.[370] There is also growing ethical pressure to address animal welfare, such as living conditions for animals,

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[363] EPA, *Estimated Animal Agriculture Nitrogen and Phosphorus from Manure*, https://www.epa.gov/nutrientpollution/estimated-animal-agriculture-nitrogen-and-phosphorus-manure (last visited Oct. 12, 2024) [https://perma.cc/Z5V4-TCW7].

[364] M. Nasir Khan & Firoz Mohammad, *Eutrophication: Challenges and Solutions, in* 2 EUTROPHICATION: CAUSES, CONSEQUENCES & CONTROL 1, 1–15 (Abid A. Ansari & Sarvajeet Singh Gill, eds., 2014).

[365] Adrian Leip et al., *Impacts of European Livestock Production: Nitrogen, Sulphur, Phosphorus and Greenhouse Gas Emissions, Land-use, Water Eutrophication and Biodiversity*, 10 ENV'T RSCH. LETTERS 1, 1–13 (2015).

[366] U.S. EPA, *Nonpoint Source: Agriculture*, https://www.epa.gov/nps/nonpoint-source-agriculture (last visited Oct. 12, 2024) [https://perma.cc/TG5E-V38T].

[367] *See e.g.*, Richards & Richards, *supra* note 38, at 308–12.

[368] Friends of the Earth & Sustain et al., *Stink or Swim: The Ten Factory Farm Corporations Producing More Toxic Excrement Than the UK's Ten Largest Cities*, at 1, https://www.sustainweb.org/assets/stink-or-swim-briefing-1714044098.pdf [https://perma.cc/QW2Q-2ATR] (last visited Jan. 28, 2024).

[369] Nikki Sutherland et al., *The Use of Antibiotics on Healthy Farm Animals and Antimicrobial Resistance*, UK Parliament House of Commons Library Research Briefing (Jan. 17, 2023), https://commonslibrary.parliament.uk/research-briefings/cdp-2023-0012/#:~:text=The%20third%20category%20is%20preventative,animals%20used%20for%20food%20production [https://perma.cc/GW53-E7CJ]; World Health Organization, *Stop Using Antibiotics in Healthy Animals to Prevent the Spread of Antibiotic Resistance* (Nov. 7, 2017), https://www.who.int/news/item/07-11-2017-stop-using-antibiotics-in-healthy-animals-to-prevent-the-spread-of-antibiotic-resistance [https://perma.cc/XJ34-9PCF].

[370] Luiz F. Brito et al., *Review: Genetic Selection of High-Yielding Dairy Cattle Toward Sustainable Farming Systems in a Rapidly Changing World*, 15 ANIMAL 1, 1 (2021).

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disease prevention and veterinary care,[371] and humane handling and slaughter of animals.[372] Furthermore, the rise of large-scale farms and mega-farms has also hindered sustainable development of rural communities.[373] Particularly, with more small farms being driven out of business, economic disparities are intensifying.[374]

D. SUMMARY

The analysis above demonstrates that while meat subsidies in the US, EU, and UK have addressed some concerns associated with availability, accessibility, and adequacy—the first three elements of the right to food—they have also led to more serious problems within these elements. As for the fourth element, despite the livestock sector's heavy reliance on "natural resources and ecological dynamics,"[375] it has exacerbated climate change and environmental degradation, undermining agricultural sustainability and long-term food security.[376] As such, structural reforms to meat subsidies are crucial for maintaining sustainable systems for the planet and for ensuring the full realization of the right to food.

IV. A CALL FOR A RIGHTS-BASED APPROACH TO MEAT SUBSIDIES

This Article advocates for a rights-based approach to meat subsidies, which highlights the realignment of meat subsidies with the protection, promotion, and fulfillment of the right to food. Specifically, governments should consider the four key elements of this right when implementing the reforms: (1) food availability, both locally and globally in the short-term and long-term; (2) accessibility, especially economic access to both animal-based and plant-based foods; (3) adequacy in general and related to human health specifically; and (4) sustainability,

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[371] Marian Stamp Dawkins, *Animal Welfare and Efficient Farming: Is Conflict Inevitable?*, 57 ANIMAL PROD. SCI. 201, 201 (2017).

[372] *E.g., see* USDA Food Safety and Inspection Service, *Humane Handling*, U.S. DEP'T OF AGRIC., https://www.fsis.usda.gov/inspection/compliance-guidance/humane-handling [https://perma.cc/5QCM-JHTR] (last visited Jan. 28, 2025).

[373] Gruneberg, *supra* note 113, at 334–35.

[374] *Id.* at 328, 336.

[375] Jarosz, *supra* note 36, at 2067.

[376] Méndez Benítez, *supra* note 6, at 61.

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with a particular focus on supporting sustainable agriculture and long-term food security. A rights-based approach holds great potential for addressing the dual challenges of food insecurity and climate change (and environmental degradation in general), as sustainability is a key component of the right to food. Furthermore, it is important to note that under international and domestic laws, states have the obligation to safeguard their citizens' right to food through the enactment and implementation of domestic laws, policies, and programs.[377] They also have shared responsibility—under Article 11.2 of the ICESCR—to facilitate the realization of this right for individuals beyond their jurisdictions.[378] This international obligation is particularly relevant for states with the financial capacity to assist others and for agri-food exporters that can support the improvement of global food availability, economic accessibility, and adequacy. A rights-based approach would facilitate states' fulfillment of their national and international obligations.

First of all, as discussed in Part II, a major issue with the existing subsidy schemes is that governments spend the majority of their agricultural budgets on meat-related subsidies, while only providing minimal support for food crops for human consumption, such as fruits and vegetables[379] that individuals are advised to consume more of to maintain good health.[380] While a study conducted by the University of Oxford considers a "vegan diet" as "the single biggest way to reduce one's impact on the planet,"[381] this Article's rights-based approach does not call for a vegan future because, as noted above, meat is an important component in global diets, and, from a human rights perspective, individuals have the right to choose their dietary preferences.[382] Rather, this Article proposes a policy shift towards reduced meat production and consumption and adopting a more plant-centric approach in distributing agricultural subsidies. This shift would reap a range of benefits. For example, it steers public funds away from continued support of unsustainable agricultural practices and consumption patterns that impede all four key elements of the right to food. It facilitates the reallocation of critical natural resources,

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[377] *See generally* Sheehy & Chen, *supra* note 83.

[378] ICESCR, *supra* note 49, at art. 11, 2.

[379] *See e.g.*, Méndez Benítez, *supra* note 6, at 48 (noting that the US government "spends 38 billion dollars a year alone on subsidizing it, while only spending 17 million subsidizing industries related to fruits and vegetables.").

[380] *See e.g.*, Smith, *supra* note 17, at 50–51 (discussing the U.S.).

[381] Sewell, *supra* note 185, at 307.

[382] Leahy et al., *supra* note 46.

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such as farmland and water resources, to support the production of more environmentally friendly, and often healthier, human-edible crops.[383] It also helps feed more people in the world while reducing the agricultural sector's climate and environmental footprints.[384] Many scholars, such as Professor Christine Parker, Professor Fiona Haines, and Laura Boehm, also advocate to reduce public support for meat production; they argue that it would result in "large gains in food system fairness and sustainability including improved animal welfare, human health, . . . and greater fairness of distribution of the food growing resources of the world."[385]

Furthermore, scientific research shows that "food security and adequate nutrition for the global population can be achieved [by] using climate-smart, sustainable agricultural practices, while reducing negative environmental impacts of agriculture, including GHG emissions."[386] Governments play a critical role in steering the transition towards sustainable animal agriculture.[387] In addition to a policy shift towards reduced meat production and consumption, there are a range of additional reforms that governments should consider implementing as part of the rights-based approach in a broad sense.

Governments should consider increasing their support for animal agriculture that "uses a mix of lower-emissions, nutrient-efficient, and climate-sustainable agricultural practices."[388] As Professor Chenyang summarizes, such practices include "growing livestock on mixed crop and livestock farms;"[389] "feeding animals organic residues from crop harvesting and processing that are unsuitable for human consumption in place of grain feed;"[390] "replacing petroleum-synthesized fertilizers through the greater use of manure and rotated planting of leguminous

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[383] Gruneberg, *supra* note 113, at 345; *see also* Tom Levitt, *Why Some Farmers Are Ditching Livestock and Growing Plants Instead*, ECOWATCH (Apr. 22, 2020), https://www.ecowatch.com/farmers-plant-transition-2645785977.html [https://perma.cc/DUE2-CZ36].

[384] Wijerathna-Yapa & Pathirana, *supra* note 7, at 1.

[385] Parker et al., *supra* note 359, at 2.

[386] Wijerathna-Yapa & Pathirana, *supra* note 7, at 1.

[387] *Id.* at 13 (noting that developing strategies that support sustainable agri-food systems is essential for upholding the right to food and addressing the climate and environmental challenges).

[388] Chenyang, *supra* note 21, at 10348–49; *see also* Mark Eisler & Michael Lee, *Steps to Sustainable Livestock*, 507 NATURE 32 (2014); VACLAV SMIL, ENRICHING THE EARTH: FRITZ HABER, CARL BOSCH, AND THE TRANSFORMATION OF WORLD FOOD PRODUCTION 206–11 (2004).

[389] Chenyang, *supra* note 21, at 10348–49 (noting that this practice "facilitates more efficient management of animal feed and manure, instead of intensive feedlots.").

[390] *Id.*

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plants";[391] and "diversifying livestock and crop varieties."[392] Agroecology and agroforestry should also be encouraged,[393] given that animals managed in a holistic grazing system can be highly sustainable. While the US, EU, and UK have taken some steps in encouraging sustainable animal agriculture, they have yet to achieve the intended outcomes; strengthened efforts are needed.

Moreover, "organic livestock farming only has a limited share in most countries,"[394] despite its environmental benefits.[395] This could be another area for targeted government support—not extensively due to its low efficiency in terms of productivity and cost, but enough to increase consumer options and improve agricultural sustainability where possible.

Governments should also consider developing incentive programs to encourage the restoration of small family farms and their adoption of sustainable practices.[396] This would be particularly relevant for the US, given that the EU and UK continue to maintain some level of small family farms while just a few megacorporations in the US control what Americans eat.[397] This approach offers a range of benefits, including, for example, improving local food security, enhancing agricultural resilience[398] and the social, economic, and environmental resilience of rural communities, and preserving cultural heritage.[399] It also promotes agri-food democracy by creating a more inclusive, equitable, and sustainable agri-food system.[400]

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[391] *Id.*

[392] *Id.*

[393] *See generally* Ludivine Petetin et al., *Green Brexit: Setting the Bar for a Green Brexit in Food and Farming*, SOIL ASSOCIATION (2019), https://www.soilassociation.org/green-brexit/ [https://perma.cc/YWQ2-BND6].

[394] Westhoek et al., *supra* note 109, at 87 (noting that organic livestock farming focuses on the use of renewable resources, "conservation of energy, soil, and water, [. . .] and environmental maintenance and enhancement.").

[395] Wijerathna-Yapa & Pathirana, *supra* note 7, at 14.

[396] Emily Ratliff Farmer, *Restoring the Small Family Farm: Sustainable Practices and Sustainable Subsidy Payments*, 18 APPALACHIAN J.L. 45, 45 (2019).

[397] Richards & Richards, *supra* note 122, at 31; Kirby, *supra* note 122, at xiv; Centner & Petetin, *supra* note 122.

[398] Petetin & Dobbs, *supra* note 268, at 111–85.

[399] *See generally* Farmer, *supra* note 396, at 45–49; Mauro Agnoletti & Antonio Santoro, *Agricultural Heritage Systems and Agrobiodiversity,* 31 BIODIVERSITY & CONSERVATION 2231, 2232–33 (2022).

[400] Ludivine Petetin, *The COVID-19 Crisis: An Opportunity to Integrate Food Democracy into Post-Pandemic Food Systems,* 11 EUR J. RISK REGUL. 326, 326-36 (2020); *see also* Neva Hassanein, *Practicing Food Democracy: A Pragmatic Politics of Transformation*, 19 J. RURAL STUD. 77, 77-86 (2003).

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Last, addressing major societal challenges such as food insecurity and climate change requires not only institutional transformation—changes in the rules and policies[401]—but also individual transformation. Individuals need to be aware of the harmful impacts the food we consume has[402] and social norms need to shift to reflect this awareness. Indeed, individuals' dietary preferences can be changed through a cultural shift.[403] Just as meat consumption once symbolized affluence and social status, and still does in some societies,[404] plant-centric diets could also become a new social norm through, for example, informal campaigns.[405] Increasing consumer demand for plant-based foods could encourage farmers to switch to growing "a broader spectrum of . . . [food crops] for direct human consumption."[406]

V. CONCLUSION

In conclusion, meat subsidies in developed economies such as the US, EU, and UK perpetuate unsustainable agricultural practices and consumption patterns. A rights-based approach to meat subsidies could chart a path forward to address the dual challenges of food insecurity and climate change and create "a more ecologically and socially just planet."[407] Governments should consider adopting this approach in reforming their meat subsidies, especially in light of the Organization for Economic Co-operation and Development and the Food and Agriculture Organization's anticipated increase in daily meat consumption over the next ten years,[408] along with the widespread, rapid, and intensifying effects of climate change.[409] While these matters demand immediate attention, it is also important to note that reforms need to be implemented progressively, as a

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[401] Danielle Celermajer et al., *Institutional Transformations: Imagination, Embodiment, and Affect*, 24 J. THEORETICAL HUMANS. 3, 3–21 (2019).

[402] Gruneberg, *supra* note 113, at 343.

[403] Chenyang, *supra* note 21, at 10344.

[404] Jarosz, *supra* note 36, at 2074.

[405] Chenyang, *supra* note 21, at 10344–45.

[406] Smith, *supra* note 17, at 50.

[407] Parker et al., *supra* note 359, at 3.

[408] OECD & FAO, OECD-FAO Agricultural Outlook 2024-2033, 167 (July 2, 2024), https://www.oecd.org/en/publications/2024/07/oecd-fao-agricultural-outlook-2024-2033_e173f332.html [https://perma.cc/9TG2-U4RL].

[409] *See generally* VALÉRIE MASSON-DELMOTTE ET AL., CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, IPCC (2021); *see also* Alvaro Calzadilla et al., *Climate Change Impacts on Global Agriculture,* 120 CLIMATIC CHANGE 357, 357-74 (2013) (discussing climate change's impacts on global agriculture).

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radical decrease in government support for meat production and consumption would encounter a multitude of obstacles.[410] First, it is likely to provoke strong backlash from the livestock sector as farmers and, most importantly, large agribusinesses, have relied on subsidies for income stability and market access for decades. In some jurisdictions, such as the US, Congress has been heavily influenced by the farm lobby. Members of Congress often prioritize the economic interests of large agribusinesses over the environment and human well-being. They will not hesitate to block the passage of a bill that is not in the best interest of those who finance their political campaigns.[411] Second, as noted in Part II, governments in the US, EU, and UK tend to take a conservative approach to subsidy reforms because they worry that drastic reforms may harm economic stability, the livelihoods of farmers, food security, and rural communities.[412] They are likely to maintain a relatively consistent approach, as their concerns have remained largely unchanged. Third, the prevailing cultural preference for meat[413] is a formidable barrier to "changing the status quo of animal agriculture."[414] A cultural shift would facilitate reduced meat consumption, but it is an incremental process that does not happen overnight. There remains a long journey ahead to fully realize the four key elements of the right to food and to combat climate change and environmental degradation. However, if the US, EU, and UK take the lead on subsidy reform, they could make a significant impact not only within their jurisdictions but also globally, given their strong social, economic, political, and cultural influence worldwide.

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[410] Parker et al., *supra* note 359, at 16–17 (noting that it would encounter "cultural, political, and economic challenges in most countries around the world.").

[411] Kammer, *supra* note 114, at 3.

[412] U.S. DEPT. AGRIC. & U.S. ENV'T. PROT. AGENCY, *supra* note 287.

[413] *See e.g.*, Karimi, *supra* note 28, at 349 (discussing "the strong cultural desire for animal products in the typical American diet."); Delgado, *supra* note 35, at 3907S–10S.

[414] Karimi, *supra* note 28, at 349.

https://doi.org/10.59015/wilj.QYWY6137