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Looking to Livestock: Gauging the Evolution of the EU's Agri-Climate Law and Policy

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Abstract

Awareness of agricultural climate impacts is growing. In the European Union (EU), the agricultural sector is responsible for significant greenhouse gas emissions while continuing to receive considerable EU budgetary support. A large share of agricultural emissions is linked to livestock husbandry, a sector the direct and indirect climate impacts of which the EU's 'green' agricultural policies have historically ignored. This blind spot extends to the sizeable global deforestation footprint from EU livestock feed imports that remains unaddressed, despite the EU's aspired status as a global climate leader and major global agricultural market player. This article benchmarks the evolution of EU agri-climate legal and policy developments, using livestock emissions as a case study to highlight the importance of learning from the successes and failures of the EU experience, to realize future attempts to tackle global agricultural emissions.

Keywords: Climate change; Agriculture; Livestock; Forests; European Union; Food systems

1. Introduction

As the global climate crisis progresses, the role of agriculture in driving environmental degradation is increasingly recognized. Historically, climate criticism has often focused on highly polluting industries, such as the fossil fuel or transport sectors. However, popular attention has been drawn to the role of agriculture, and particularly livestock, in driving global greenhouse gas (GHG) emissions,¹ with the Intergovernmental Panel on Climate Change (IPCC) reporting that food emissions contribute between 21% and 37% of total global GHG emissions.² Moreover, agriculture has been cited as a leading driver in ecosystem degradation in forest settings,³ water sources,⁴ and beyond.

¹ These include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

² See more in C. Mbow et al., 'Food Security', in IPCC (P.R. Shukla et al. (eds)), *Climate Change and Land: An IPCC Special Report on Climate Change, Desertification, Land Degradation, Sustainable Land Management, Food Security, and Greenhouse Gas Fluxes in Terrestrial Ecosystems* (IPCC, 2019), pp. 439–550.

³ See more in S. Margulis, *Causes of Deforestation in the Brazilian Amazon*, World Bank Working Paper No. 22 (International Bank for Reconstruction and Development & The World Bank, 2004).

⁴ J. Mateo-Sagasta, S. Marjani & H. Turrall, 'Water Pollution from Agriculture: A Global Review – Executive Summary' (Food and Agriculture Organization of the United Nations (FAO) &

The European Union's (EU) agricultural sector is no exception, despite the EU's reputation for general leadership in international climate governance.⁵ One report suggests that agriculture is responsible for 10.3% of the EU's GHG emissions, with nearly 70% of those emissions coming from the livestock sector.⁶ These numbers relate only to 'direct' emissions, not indirect emissions such as those related to the impact of imported animal foodstuff.⁷ It is reported that about 70% of all the livestock feed protein used in the EU is imported, and only 1.8% of domestic arable land is dedicated to its domestic production.⁸ These agricultural imports, such as soybean for EU livestock feed, cause deforestation impacts globally.⁹ Overall, a significant amount of the emissions produced from deforestation and land use and land-use change (LULUCF) stemming from the EU's agricultural sector are produced beyond EU borders. While specific data on the global climate impact of the EU Common Agricultural Policy (CAP) is not easily quantifiable, Cuypers and co-authors suggest that for the period from 1990 to 2008, the EU-27 imported almost 36% of all deforestation impacts embodied in crop and livestock products traded between regions.¹⁰

Despite this significant impact, even beyond EU borders the EU agricultural sector has arguably lagged in its agri-climate governance.¹¹ Moreover, legal scholarship on the development of the EU livestock-specific climate governance has been surprisingly sparse.¹² This article intends to fill this gap, providing a commentary on the development of this agri-climate governance to date, and the extent to which recent developments mark a turning point in the EU approach to agricultural emissions. Because of the predominant impact (though at times, contested)¹³ of livestock production on

International Water Management Institute ((IWMI), 2017), available at: <https://www.iwmi.cgiar.org/Publications/wle/fao/water-pollution-from-agriculture-a-global-review.pdf>.

⁵ See more in, e.g., R. Wurzel & J. Connelly, *The European Union as a Leader in International Climate Change Politics* (Routledge, 2010).

⁶ A. Leip et al., 'Impacts of European Livestock Production: Nitrogen, Sulphur, Phosphorus and Greenhouse Gas Emissions, Land-Use, Water Eutrophication and Biodiversity' (2015) 10(11) *Environmental Research Letters*, article 115004.

⁷ Ibid.

⁸ Ibid., pp. 25–6.

⁹ For more on the environmental impact of the EU's agricultural sector see A. Muller & L. Bautze, *Agriculture and Deforestation: The EU Common Agricultural Policy, Soy, and Forest Destruction – Proposals for Reform* (Fern, 2017).

¹⁰ D. Cuypers et al., *The Impact of EU Consumption on Deforestation: Comprehensive Analysis of the Impact of EU Consumption on Deforestation – Final Report* (EU Publications Office, 2013), available at: <http://dx.publications.europa.eu/10.2779/82226>.

¹¹ 'Governance' in this article is defined broadly, viewing a governance regime as a 'set of laws, processes and institutions that have evolved by addressing a particular problem or function' and that are commonplace when addressing multi-faceted and multi-sectoral environmental issues. For more discussion on governance in a fragmented environmental context see M. Young, *Trading Fish, Saving Fish: The Interaction between Regimes* (Cambridge University Press, 2011).

¹² Though a broader assessment of EU agri-climate governance has been addressed by J. Verschuuren, 'Achieving Agricultural Greenhouse Gas Emission Reductions in the EU Post-2030: What Options Do We Have?' (2022) 31(2) *Review of European, Comparative & International Environmental Law*, pp. 246–57.

¹³ For more on the benefits of specific livestock systems (such as upland grazing) see T. Garnett et al., *Grazed and Confused?* (Food and Climate Research Network, 2017); E. Houzer & I. Scoones, *Are Livestock Always Bad for the Planet? Pastoralism, Uncertainty and Resilience* (PASTRES, 2021). Though some

agricultural emissions¹⁴ and disproportionate support historically offered to livestock farming in the EU,¹⁵ the livestock sector will be used as an example to demonstrate the development of the EU approach over time to governing the climate impacts of its agricultural sector.

This article also provides a case study of one approach to sustainable food systems transformation in rapidly developing and developing regions *after* their respective ‘livestock revolutions’ (where meat consumption increases following growth in average household incomes and a growing middle class¹⁶).¹⁷ Some reports suggest that meat consumption is expected to increase by up to 60% by 2050 from a 2010 baseline.¹⁸ Despite this, climate solutions promoted for the livestock sector are often predominantly technical,¹⁹ focusing on the climate efficiency of developing country livestock production rather than taking a full food system approach, which also recognizes demand-side drivers of livestock consumption that are relevant in tackling the path dependency of historical meat production.²⁰ Increasingly, scientific studies report a need for these demand-side strategies, such as dietary change, to be introduced in addition to technical solutions to achieve the necessary mitigation levels for the global agricultural sector.²¹ EU law and policy in this area can provide a case study from

commentators highlight the environmental impacts of upland grazing; see G. Williams et al., ‘Increasing the Productivity of an Upland Pasture with the Least Environmental Impacts’ (2021) 315 *Agriculture, Ecosystems & Environment*, article 107449.

¹⁴ H. Steinfeld et al., *Livestock’s Long Shadow: Environmental Issues and Options* (FAO, 2006).

¹⁵ Livestock farming pay-outs, taking into account CAP payments based on farm size and payments that support livestock production, are reported to be between €22.5 billion and €32.6 billion, i.e. between 18 and 20% of the EU’s total annual budget; see Greenpeace, *Feeding the Problem: The Dangerous Intensification of Animal Farming in Europe* (Greenpeace, 2019), p. 15. One 2017 study from Wageningen University & Research for the European Parliament Agri-Committee reported that dairy farmers are reliant on CAP payments for about 70% of their income, while for beef farms this share is even more than 100%; see R. Ihle et al., *Research for Agri Committee: The EU Cattle Sector: Challenges and Opportunities – Milk and Meat: Study* (European Union, 2017), p. 22.

¹⁶ See more in K.F. Davis et al., ‘Meeting Future Food Demand with Current Agricultural Resources’ (2016) 39 *Global Environmental Change*, pp. 125–32.

¹⁷ Though noting that an emulation or translation of this approach will need to be adapted to specific regional or national contexts. For one attempt to demonstrate the contextualization of sustainable food system transformation see C. Leeuwis, B.K. Boogaard & K. Atta-Krah, ‘How Food Systems Change (Or Not): Governance Implications for System Transformation Processes’ (2021) 13 *Food Security*, pp. 761–80.

¹⁸ B. Revell, ‘Meat and Milk Consumption 2050: The Potential for Demand-Side Solutions to Greenhouse Gas Emissions Reduction’ (2015) 14(3) *EuroChoices*, pp. 4–11.

¹⁹ E.g., using more efficient herd breeds or dual utilization breeds so that fewer cattle are needed to produce the same or more beef and dairy products; altering cattle feed composition so that less methane is produced by the cattle’s digestive process, including adding feed additives to reduce emissions and more effective manure storage to minimize the amount of methane produced while manure is being stored.

²⁰ For more on the historically Anglocentric nature of meat consumption, and how this has translated into global consumption patterns of livestock products see R. Williams, *Climate Change, Cattle and the International Legal Order* (Hart, 2024), pp. 17–23.

²¹ Davis et al., n. 16 above; E. Wollenberg et al., ‘Reducing Emissions from Agriculture to Meet the 2°C Target’ (2016) 22(12) *Global Change Biology*, pp. 3859–64. For more on sustainable diet modelling see FAO and World Health Organization (WHO), ‘Sustainable Healthy Diets: Guiding Principles’ (FAO & WHO, 2019).

which other ‘post-livestock revolution’ agricultural sectors can take positive and negative lessons, in a similar vein to other global learning experiences from EU climate innovation in the past, such as emissions trading schemes.²² This is particularly important against identified structural difficulties in reducing emissions from the agri-food sector.²³

The remainder of this article is structured as follows. Section 2 outlines the bases for the EU climate mandate and responsibility for its livestock sector, making reference to both endogenous and exogenous factors driving action for the sector. Section 3 maps the gradual greening evolution in EU agri-climate governance, making specific reference to reforms of the CAP²⁴ over time, and newer developments such as the Farm to Fork Strategy²⁵ and the EU’s new Forest and Ecosystem Risk Commodities (FERCs) Due Diligence Regulation. Section 4 will then benchmark these evolutions against general global efforts in the area, making reference to submitted national climate plans as required by the 2015 Paris Agreement,²⁶ in addition to international climate negotiations. Section 5 concludes by summarizing key arguments made and placing the relevance of EU efforts in agri-climate governance in the global food system’s landscape for climate change mitigation, and expressing words of caution on the future of EU livestock governance.

2. Establishing the Basis for EU Agri-Climate Action

Before benchmarking and mapping the development of the EU’s approach to livestock emissions to date, it is necessary to establish the basis for its mandate to undertake agri-climate governance generally, and any responsibility to enhance the ambition or scope of these efforts, both internally and externally. For the purpose of this article, these bases will be categorized into (i) endogenous bases, and (ii) exogenous bases.

Endogenous bases for EU agri-climate action are first identified in references to core EU legal provisions mandating climate action, including the agricultural sector. Beyond this, EU Member State (MS) preferences to address the climate crisis will also be discussed to highlight the range of endogenous drivers for agri-climate action in the EU. In terms of exogenous bases, international climate obligations and principles will be discussed, including the Paris Agreement and key burden-sharing principles

²² See, e.g., how global actors learned from the mistakes of the EU emissions trading experience, stating the EU Emissions Trading System (ETS) model as ‘non-aspirational’ to the United States (US) experience, but nonetheless learned from issues with the scheme, such as over-allocation in the first ETS period; see K. Biedenkopf, ‘Emissions Trading: A Transatlantic Journey for an Idea?’, KFG Working Paper No. 45, Sept. 2012), available at: https://userpage.fu-berlin.de/kfgeu/kfgwp/wpseries/WorkingPaperKFG_45.pdf.

²³ For a comprehensive overview of some of these difficulties see S.J. Vermeulen et al., ‘Changing Diets and the Transformation of the Global Food System’ (2020) 1478(1) *Annals of the New York Academy of Sciences*, pp. 3–17.

²⁴ As established in Arts 38–44 of the Treaty on the Functioning of the European Union (TFEU), Lisbon (Portugal), 13 Dec. 2007, in force 1 Dec. 2009, [2012] OJ C 326/01, available at: <http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2012:326:FULL:EN:PDF>.

²⁵ European Commission, Communication, ‘A Farm to Fork Strategy for a Fair, Healthy and Environmentally-Friendly Food System’, COM(2020) 381, 20 May 2020 (Farm to Fork Strategy).

²⁶ Paris (France), 12 Dec. 2015, in force 4 Nov. 2016, available at: https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

such as the principle of common but differentiated responsibilities and respective capabilities in the light of different national circumstances (CBDR-RC). Establishing an exact scientific proportioning of the EU's responsibility to reduce its livestock emissions is not the goal of this article.

2.1. Endogenous Bases for EU Agri-Climate Governance

Generally, the EU has a strong internal mandate to address climate change. Following the enactment of the 1986 Single European Act,²⁷ common environmental policy was placed within the core competencies of the EU (at the time called the European Community (EC)), with the aims of preserving the quality of the environment, protecting human health, and ensuring rational use of natural resources.²⁸ Article 191 of the Treaty on the Functioning of the EU (TFEU)²⁹ also required the pursuit of Union measures at the international level to address regional or worldwide environmental problems, in particular combating climate change.³⁰ Since then, the EU has aimed to be a 'leader' in international climate politics,³¹ with increasing creation and mainstreaming of climate policies over the years.

The EU was the first major economy to submit its national climate plan under the Paris Agreement, and its submission was seen to be one of the most ambitious of all developed country parties.³² The EU was on track to meet its 2020 target of a 20% reduction in GHG emissions from 1990 levels, and further commitments have been made as part of the recent European Green Deal (EGD).³³ Under the EGD, the EU plans to be the first climate-neutral region by 2050, and foresees reducing emissions by at least 55% from 1990 levels, enacting a series of climate action initiatives, including a European Climate Law (to enshrine the 2050 neutrality goal),³⁴ a European Climate Pact (to engage society in climate action),³⁵ and a 2030 Climate Target Plan (to enshrine the EGD reduction goals).³⁶

²⁷ Luxembourg (Luxembourg), 17 Feb. 1986, and The Hague (The Netherlands), 28 Feb. 1986, in force 1 July 1987, available at: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:11986U/TXT&from=EN>.

²⁸ Now consolidated in Art. 191 TFEU, n. 24 above.

²⁹ N. 24 above.

³⁰ See J. Gupta & M.J. Grubb, 'Leadership', in J. Gupta & M.J. Grubb (eds), *Climate Change and European Leadership: A Sustainable Role for Europe?* (Kluwer, 2000), pp. 10–2.

³¹ C.F. Parker, C. Karlsson & M. Hjerpe, 'Climate Change Leaders and Followers: Leadership Recognition and Selection in the UNFCCC Negotiations' (2015) 29(4) *International Relations*, pp. 434–54.

³² For general discussion of the negotiations and nationally determined contributions (NDCs) see L. Rajamani, 'Ambition and Differentiation in the 2015 Paris Agreement: Interpretative Possibilities and Underlying Politics' (2016) 65(2) *International and Comparative Law Quarterly*, pp. 493–514.

³³ European Commission, Communication, 'The European Green Deal', COM(2019) 640, 11 Dec. 2019 (EGD Communication).

³⁴ *Ibid.*, para. 2.1.1.

³⁵ *Ibid.*, para. 4.

³⁶ *Ibid.*, para. 2.1.1. Within this, the revised Directive (EU) 2023/2413 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the Promotion of Energy from Renewable Sources, and repealing Council Directive (EU) 2015/652 [2023] OJ L 2023/2413 (Renewable Energy Directive) mandates a renewable energy target of at least 42.5% binding at EU level by 2030 – but aiming for 45%. The Directive strengthens the bioenergy sustainability criteria from its predecessor, Directive

The EU's current main climate framework for 2030 revolves around three main instruments, some of which are directly relevant for agricultural emissions. Firstly, the 2003 Emissions Trading System (ETS) Directive³⁷ has created a mandatory cap-and-trade system for prescribed industries in the EU, including the power sector, heavy industry, and domestic aviation (though, notably, excluding the agricultural sector).³⁸ The Directive limits emissions by setting EU-wide limits (currently in its 4th Phase, which aligns with the EGD targets³⁹), and companies or 'installations' can buy or receive emissions allowances depending on the level of their emissions. The Effort Sharing Regulation (ESR)⁴⁰ is a key part of this climate framework, regulating emissions from sectors not covered by the ETS Directive or from the LULUCF Regulation,⁴¹ this time including the agricultural sector. Different Annual Emissions Allocations exist for MS depending on their national circumstances, but they all aspire towards overall EU climate goals, including the targets of the EGD.⁴² Lastly, the LULUCF Regulation creates a 'no debit' rule for forests, where MS must ensure that emissions from LULUCF are 'entirely compensated' by an equivalent removal of carbon dioxide (CO₂) from the atmosphere from some form of action in the sector.⁴³ National Energy and Climate Plans (NECPs) and national Long Term Strategies (nLTS) are created by MS in line with these policies, as mandated under the Governance of the Energy Union and Climate Action Regulation.⁴⁴ From this legislative framework, a comprehensive internal mandate for climate action is formed at both EU and MS levels. However, as mentioned, certain components, such as the ETS, exclude emissions from the agricultural sector, such as those from livestock production. As a result, it is necessary to delineate the relevant provisions for climate action in broader EU agricultural policy, namely the CAP.⁴⁵

(EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources [2018] OJ L 328/82. This has relevance for agricultural crops being used for bioenergy, but because of the focus of livestock feed crops of this article is not explored in depth here.

³⁷ Directive 2003/87/EC establishing a System for Greenhouse Gas Emission Allowance Trading within the Union and amending Council Directive 96/61/EC [2003] OJ L 275/32.

³⁸ For more on the ETS and its relationship to agriculture see A. Matthews, 'Trade Policy Approaches to Avoid Carbon Leakage in the Agri-Food Sector' (The Left in the European Parliament, 2022).

³⁹ EGD Communication, n. 33 above, para. 2.1.1.

⁴⁰ Regulation (EU) 2018/842 on Binding Annual Greenhouse Gas Emission Reductions by Member States from 2021 to 2030 Contributing to Climate Action to Meet Commitments under the Paris Agreement and amending Regulation (EU) No 525/2013 [2018] OJ L 156/26.

⁴¹ Regulation (EU) 2023/839 amending Regulation (EU) 2018/841 as regards the Scope, Simplifying the Reporting and Compliance Rules, and Setting Out the Targets of the Member States for 2030, and Regulation (EU) 2018/1999 as regards Improvement in Monitoring, Reporting, Tracking of Progress and Review [2021] OJ L 107/1.

⁴² EGD Communication, n. 33 above, para 2.1.1.

⁴³ Regulation (EU) 2023/839, n. 41 above.

⁴⁴ Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action, amending Regulations (EC) No 663/2009 and (EC) No 715/2009, Directives 94/22/EC, 98/70/EC, 2009/31/EC, 2009/73/EC, 2010/31/EU, 2012/27/EU and 2013/30/EU, Directives 2009/119/EC and (EU) 2015/652 and repealing Regulation (EU) No 525/2013 [2018] OJ L 328/1 (Governance of the Energy Union and Climate Action Regulation).

⁴⁵ Though this does not undermine the potential relevance of other EU legislation that can have an impact on agricultural emissions, such as Directive 91/676/EEC concerning the Protection of Waters against

The CAP was first created after the Second World War to prevent future food shortages and instances of hunger and starvation primarily through price support (with financial support still forming a central part of the CAP today).⁴⁶ In the current TFEU provisions outlining the CAP⁴⁷ there are no specific references to balancing agriculture with broader environmental goals, such as climate change.⁴⁸ The CAP has undergone significant reform over the years, particularly with the 1992 MacSharry reforms, following international recognition of the worldwide trade-distorting impacts of productivist⁴⁹ agricultural policies in the EU on global agricultural commodity prices through its internal minimum price guarantees for farmers.⁵⁰ The most trade-distorting internal supports were gradually reduced through further reform, with increased ‘greening’ of the CAP from 2003 and further reforms in 2013, again seeking to increase its sustainability focus, including addressing climate change.⁵¹ Nevertheless, the EU agricultural policy continues to be characterized by ‘industrially driven and expansionist agriculture with state support’.⁵²

The 2014–20 CAP implementation period was similarly criticized for under-delivering on the EU Commission’s arguably ‘post-productivist’⁵³ climate aspirations for reform.⁵⁴ The newest CAP reform (with implementation ongoing from January 2023) again sought to increase ‘green ambition’, introducing new architecture and measures, which include obliging each EU MS to demonstrate

Pollution Caused by Nitrates from Agricultural Sources [1991] OJ L 375/1 (Nitrates Directive). See further G. Velthof et al., ‘The Impact of the Nitrates Directive on Nitrogen Emissions from Agriculture in the EU-27 during 2000–2008’ (2014) 468–469 *Science of the Total Environment*, pp. 1225–33.

⁴⁶ H. Zobbe, ‘The Economic and Historical Foundation of the Common Agricultural Policy in Europe’, Unit of Economics Working Papers 2001/12, Royal Veterinary and Agricultural University, Food and Resource Economic Institute, Sept. 2001, p. 10.

⁴⁷ Arts 38–44 TFEU, n. 24 above.

⁴⁸ Though, arguably, environmental integration is encouraged across all policy areas under Art. 11 TFEU, n. 24 above. For more on environmental integration in EU agricultural policy see G. Alons, ‘Environmental Policy Integration in the EU’s Common Agricultural Policy: Greening or Greenwashing?’ (2017) 24(11) *Journal of European Public Policy*, pp. 1604–22. More generally on environmental integration see B. Sjäfjell, ‘The Environmental Integration Principle: A Necessary Step towards Policy Coherence for Sustainability’, in F. Ippolito, M.E. Bartoloni & M. Condinanzi (eds), *The EU and the Proliferation of Integration Principles under the Lisbon Treaty* (Routledge, 2014), pp. 105–22. Other broader socio-economic or development goals, such as farmer livelihoods, are referenced; see, e.g., Art. 39 TFEU, n. 24 above.

⁴⁹ See G.A. Wilson & R.J.F. Burton, ‘“Neo-Productivist” Agriculture: Spatio-Temporal versus Structuralist Perspectives’ (2015) 38 *Journal of Rural Studies*, pp. 52–64, at, e.g., 52 and 55.

⁵⁰ Muller and Bautze, n. 9 above, p. 11.

⁵¹ *Ibid.*, pp. 12–8.

⁵² G. Wilson, ‘From Productivism to Post-Productivism ... and Back Again? Exploring the (Un)Changed Natural and Mental Landscapes of European Agriculture’ (2001) 26(1) *Transactions of the Institute of British Geographers*, pp. 77–102, at 77–8.

⁵³ Wilson & Burton, n. 49 above, at, e.g., p. 55, and discussions of European farming multifunctionality and neo-productivism from p. 57.

⁵⁴ See, e.g., D. Mottershead et al., *Evaluation Study of the Impact of the CAP on Climate Change and Greenhouse Gas Emissions* (European Union, 2018). This study makes note of limitations of the previous CAP implementation on account of factors such as the CAP design not mandating climate action, a lack of emissions impact assessment of voluntary coupled support for livestock, and the need for better support and guidance for MS.

non-retrogression in its environment and climate action in its national CAP strategic plan.⁵⁵ The intention has been to link measures under the CAP with achieving the EGD⁵⁶ and the new Farm to Fork Strategy.⁵⁷ Most notably, 40% of the new CAP budget must be climate-relevant.⁵⁸ Some concerns have already been reported in a Staff Working Document surrounding the actual climate benefits the new CAP will entail,⁵⁹ in addition to the Commission raising concerns about published draft CAP strategic plans ignoring methane emissions from livestock.⁶⁰ Notwithstanding these reservations, recent reforms of the CAP indicate an increased basis and motivation for addressing climate change and livestock in its agricultural policies, particularly given its productivist history.

A final component of the endogenous basis for EU agri-climate governance is individual MS motivation. The Eurobarometer Special Report on Climate Change in 2021 reported that 93% of EU citizens see climate change as a ‘serious problem’, with 78% seeing it as a ‘very serious problem’.⁶¹ 90% of respondents and at least three quarters from each MS agreed that ‘[GHG] emissions should be reduced to a minimum while offsetting the remaining emissions, in order to make the EU economy climate-neutral by 2050’.⁶² Moreover, 57% of respondents said that the EU is responsible for tackling climate change within the region.⁶³

With regard to livestock emissions, 31% of respondents reported buying and eating less meat to help in contributing to action against climate change.⁶⁴ However, national attitudes to addressing livestock emissions are more varied. The Commission suggests that:

[most proposed MS CAP strategic plans] ignore the importance of actions to reduce methane emissions from livestock and those with high intensive livestock production do not tackle these emissions at all, which is also reflected in the fact that only 9 out of 28 [plans] set the relevant climate targets for the livestock sector.⁶⁵

⁵⁵ For a summary of current national CAP strategic plans see European Commission, ‘Approved 28 CAP Strategic Plans (2023–2027)’, June 2023, available at: <https://agriculture.ec.europa.eu/system/files/2023-06/approved-28-cap-strategic-plans-2023-27.pdf><http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:11986U/TXT&from=EN>.

⁵⁶ European Commission, ‘Commission Staff Working Document: Analysis of Links between CAP Reform and Green Deal’, 20 May 2020, SWD(2020) 93, e.g., p. 9.

⁵⁷ N. 25 above.

⁵⁸ See Regulation (EU) 2021/2115 establishing Rules on Support for Strategic Plans to be Drawn up by Member States under the Common Agricultural Policy (CAP Strategic Plans) and Financed by the European Agricultural Guarantee Fund (EAGF) and by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulations (EU) No 1305/2013 and (EU) No 1307/2013 [2021] OJ L 435/1 (CAP Strategic Plans Regulation), Recital 94.

⁵⁹ N. 56 above, p. 17.

⁶⁰ European Commission, ‘Proposed CAP Strategic Plans and Commission Observations: Summary Overview of 27 Member States’, June 2022, p. 23.

⁶¹ European Commission, *Special Eurobarometer 513: Climate Change* (European Union, 2021), p. 7.

⁶² *Ibid.*

⁶³ *Ibid.*

⁶⁴ *Ibid.*

⁶⁵ European Commission, n. 60 above, p. 23.

By comparison, when the Amazon fires broke out in 2019 (attributed to slash and burn deforestation techniques⁶⁶), MS were more forthright in their stance against the Brazilian government and its trade relationship with the EU. For example, Austria, France, and Ireland threatened to block the EU-Mercosur Agreement⁶⁷ in the Council of Ministers on account of of Brazil's backstepping in forest protection, particularly with regard to the high-profile fire outbreaks.⁶⁸ These instances highlight that MS motivations are also a relevant factor in considering the internal, endogenous drivers of EU action on livestock emissions. Further exogenous legal bases for EU agri-climate action are discussed in the section below.

2.2. Exogenous Bases for EU Agri-Climate Governance

External factors also provide a basis for the EU's responsibility to address agricultural emissions, including those from livestock. These include (i) international climate change law obligations, and (ii) the EU's moral responsibility to address climate change.

The EU's international climate change obligations

The EU is party to the 1992 United Nations Framework Convention on Climate Change (UNFCCC)⁶⁹ and its additional instruments, including the 2015 Paris Agreement.⁷⁰ The core aim of the Paris Agreement is:

[to hold] the increase in the global average temperature to well below 2°C above pre-industrial levels and pursu[e] efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.⁷¹

To meet this target, parties aim to peak global emissions by 2050 (Article 4(1)).⁷² Country signatories self-determine their own nationally determined contributions (NDCs) in the light of the Agreement's legal framework.⁷³

Whilst agricultural emissions mitigation is not explicitly mandated by the Paris Agreement,⁷⁴ there is reference to vulnerability of food production and agriculture in

⁶⁶ N. Andela et al., 'Tracking and Classifying Amazon Fire Events in Near Real Time' (2022) 8(3) *Science Advances*, article eabd2713.

⁶⁷ Details and status available at: https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/mercosur/eu-mercosur-agreement_en.

⁶⁸ J. Stone, 'Emmanuel Macron Says He Will Block EU Trade Deal with Brazil over Amazon Forest Fires', *The Independent*, 23 Aug. 2019, available at: <https://www.independent.co.uk/news/world/europe/macron-amazon-forest-fires-veto-mercosur-eu-trade-deal-brazil-a9076181.html>; G. Fahy & G. Baczynska, 'EU Piles Pressure on Brazil over Amazon Fires', *Reuters*, 23 Aug. 2019, available at: <https://www.reuters.com/article/us-eu-mercosur-ireland/eu-piles-pressure-on-brazil-over-amazon-fires-idUSKCN1VD0PJ>.

⁶⁹ New York, NY (US), 9 May 1992, in force 21 Mar. 1994, available at: <https://unfccc.int>.

⁷⁰ N. 26 above.

⁷¹ *Ibid.*, Art. 2.

⁷² *Ibid.*, Art. 4(1).

⁷³ Rajamani, n. 32 above, p. 501.

⁷⁴ See more generally in A. Zahar, 'Agricultural Exceptionalism in the Climate Change Treaties' (2023) 12(1) *Transnational Environmental Law*, pp. 42–70.

the UNFCCC.⁷⁵ While the content of each NDC is self-determined and designed to have some in-built flexibilities for parties,⁷⁶ there is precedent for parties, such as the EU, to include the emissions inventory of their agricultural sector in their NDC.⁷⁷ Moreover, the agricultural sector has increasingly been considered in conference of the parties (COP) decisions, most recently in the Sharm El Sheikh Joint work on the implementation of climate action on agriculture and food security⁷⁸ at COP-27 in Egypt, as well as its predecessor, the Koronivia Joint Work on Agriculture.⁷⁹ As a result, it can be said that the EU has a legal obligation to consider the viability of food production in its national climate plans, with increasing likelihood of soft or hard legal obligations to address its livestock emissions following subsequent COP negotiation rounds.

The EU's moral responsibility for agri-climate governance

Beyond this, some see a moral duty for the EU to reduce its global environmental footprint. For example, Durán and Scott derive a moral responsibility for the importation by the EU of forest and ecosystem risk commodities (such as livestock-related commodities, like soy for feed), outlining EU 'complicity' in global forest degradation if it remains inactive in addressing the environmental impact of its agricultural consumption.⁸⁰ Similarly, Scott has derived both 'first-order' and 'second-order' climate responsibilities for the EU, utilizing Caney's work.⁸¹ First-order responsibilities address the EU's 'fair-share' of the burden in addressing climate change, given their historical and current contribution to global climate impacts.⁸² Second-order responsibilities for the EU go beyond this initial 'fair-share', utilizing their relative global market power to induce other actors to comply with their first-order responsibilities and prevent the potential harm of these actors' inaction.⁸³ I have argued elsewhere that the morality-based environmental law principle of CBDR-RC (also enshrined in Article 2(2) of the Paris Agreement) also justifies the EU's need to better govern livestock emissions.⁸⁴ However, the purpose of this section was not to outline these

⁷⁵ N. 69 above, Art. 2. Agriculture is only considered a 'relevant sector' under Art. 4(c) and (e) in reference to technology transfer and adaptation, not mitigation. For more on the inclusion of agriculture in the international climate regime see also Williams, n. 20 above, pp. 39–57.

⁷⁶ For more on self-differentiation under the Paris Agreement see Rajamani, n. 32 above.

⁷⁷ The EU's most recently updated NDC is available at: https://unfccc.int/sites/default/files/NDC/2022-06/EU_NDC_Submission_December%202020.pdf.

⁷⁸ UNFCCC COP Decision 4/CP.23, 'Koronivia Joint Work on Agriculture', 17 Nov. 2017, UN Doc. FCCC/CP/2017/11/Add.1.

⁷⁹ UNFCCC COP Decision 3/CP.27, 'Sharm El-Sheikh Joint Work on Implementation of Climate Action on Agriculture and Food Security', 6 Nov. 2022, UN Doc. FCCC/CP/2022/10/Add.1.

⁸⁰ G. Durán & J. Scott, 'Regulating Trade in Forest-Risk Commodities: Two Cheers for the European Union' (2022) 34(2) *Journal of Environmental Law*, pp. 245–67, at 257–61.

⁸¹ See J. Scott, 'The Geographical Scope of the EU's Climate Responsibilities' (2015) 17 *Cambridge Yearbook of European Legal Studies*, pp. 92–120, at 97 (referring to S. Caney, 'Two Kinds of Climate Justice: Avoiding Harm and Sharing Burdens' (2014) 22(2) *Journal of Political Philosophy*, pp. 125–49).

⁸² Scott, *ibid.*, from p. 97.

⁸³ *Ibid.*

⁸⁴ See more in Williams, n. 20 above, pp. 154–76.

moral arguments in depth, but to flag up further rationales that support the general need for the EU to address the agri-climate impacts of its livestock sector through legal avenues. These moral arguments support the EU in addressing its domestic livestock production and complicity in agriculture-driven environmental degradation beyond its borders, such as deforestation of land for feedstock crops in South America.⁸⁵

3. The Evolution of EU Agri-Climate Governance

Having provided bases for EU-level law and policymaking on agri-climate issues, this section will outline the evolution of the EU's agri-climate law and policies and the extent to which the EU is currently addressing its climate responsibilities for this sector. It will do so by discussing the EU CAP and its reform, in addition to the EU's Farm to Fork Strategy. The EU's new Due Diligence Regulation will also be discussed to address EU complicity in agricultural-driven deforestation beyond its borders.⁸⁶

3.1. The CAP Reforms

As mentioned, since 1992 the CAP has increasingly been 'greened' and has attempted to address the environmental impact of EU agricultural production (and issues with overproduction stemming from its historical productivist model).⁸⁷ Following the Agenda 2000 reforms, CAP payments were provided in a Two Pillar format: one for direct income support for farmers (Pillar 1), and the second for voluntary rural development measures that were co-financed by MS (Pillar 2).⁸⁸

Following further reforms in 2003, direct farm payments were largely decoupled from production.⁸⁹ In 2013, reforms of direct income support to farmers became conditional on meeting compulsory 'greening measures',⁹⁰ such as measures relating to crop diversification requirements, ecological focus areas, and permanent grassland maintenance, in addition to cross-compliance rules, including statutory

⁸⁵ Muller & Bautze, n. 9 above, pp. 19–33.

⁸⁶ Regulation (EU) 2023/1115 on the Making Available on the Union Market and the Export from the Union of Certain Commodities and Products Associated with Deforestation and Forest Degradation and repealing Regulation (EU) No 995/2010 [2023] OJ L 150/206 (Due Diligence Regulation).

⁸⁷ For an account see generally B. O'Connor, 'The Food Crisis and the Role of the EC's Common Agricultural Policy', in B. Karapinar & C. Haberli (eds), *Food Crises and the WTO* (Cambridge University Press, 2010), pp. 187–219.

⁸⁸ See European Commission, 'Agenda 2000: For a Stronger and Wider Union', COM(97) 2000 final, 15 July 1997, from p. 22.

⁸⁹ As opposed to payments incentivized by levels of production, as was the case with the previous CAP – thereby leading to distortion in global market price; for more see A. Cunha & A. Swinbank, *An Inside View of the CAP Reform Process: Explaining the MacSharry, Agenda 2000 and Fischler Reforms* (Oxford University Press, 2011), pp. 68–101, although voluntary coupled support still exists; for more detail see Wilson & Burton, n. 49 above.

⁹⁰ For a comprehensive overview see Alons, n. 48 above.

management requirements (SMR), such as compliance⁹¹ with the 1991 Nitrates Directive.⁹²

None of these compulsory greening measures addressed the main driver of agricultural emissions in the EU: enteric fermentation (the digestive process of certain livestock that produces methane gas). Moreover, sizeable livestock farmer pay-outs existed under the CAP, including voluntary coupled support – or, in other words, payments that are linked to baselines of protection for the specific production of agricultural products.⁹³ Generally, these payments have gradually reduced in number as the CAP has been reformed. However, even after this further supposed ‘green’ reform in 2013, payments for animal products were still sizeable.⁹⁴ The impact of this support on levels of livestock production has been criticized, with one study in 2014 suggesting that the removal of this coupled support for the cattle sector would have reduced production in the beef sector by 2.5% and by 0.7% in the dairy sector.⁹⁵

Similarly, voluntary agri-environment-climate ‘rural development measures’⁹⁶ under Pillar 2, designed to support commitments beyond minimum mandatory CAP standards, were found to fall short in their climate ambition.⁹⁷ Rural development programmes that existed for livestock production frequently focused on improving animal welfare, or modernizing farms to improve efficiency, whereas programmes targeting reducing livestock emissions were minimal.⁹⁸ Moreover, there was no obligation for farmers to undertake rural development climate measures, and, in fact, it is reported that only 17% of funding taken up under these rural development programmes from 2014 to 2020 were for ‘agri-environment-climate’ measures, specifically.⁹⁹

⁹¹ Though voluntary cross compliance was an option from as early as 1992, as part of the MacSharry reforms, with further options for voluntary cross compliance made possible following the Agenda 2000 reform of the CAP. The formal requirements for cross-compliance were introduced as part of the 2003 reforms of the CAP. For more on this see M. Farmer & V. Swales, ‘The Development and Implementation of Cross Compliance in the EU: An Analysis’, Institute for European Environmental Policy, Dec. 2004.

⁹² N. 45 above. See Recitals 41–44 of Regulation (EU) No 1307/2013 establishing Rules for Direct Payments to Farmers under Support Schemes within the Framework of the Common Agricultural Policy and repealing Regulations (EC) No 637/2008 and (EC) No 73/2009 [2013] OJ L 347/608.

⁹³ For more on coupled agricultural subsidies see T. Jansson et al., ‘Coupled Agricultural Subsidies in the EU Undermine Climate Efforts’ (2020) 43(4) *Applied Economic Perspectives and Policy*, pp. 1503–19.

⁹⁴ The latest available data states that in 2018 a total of €3.99 billion was paid in coupled support in that year, of which around 40% supported beef production and around 21% supported milk production: European Commission, ‘Summary Report on the Implementation of Direct Payments (Except Greening): Claim Year 2020’, Dec. 2022, p. 25.

⁹⁵ Mottershead et al., n. 54 above, p. 49.

⁹⁶ As laid down in Regulation (EU) No 1305/2013 on Support for Rural Development by the European Agricultural Fund for Rural Development (EAFRD) and repealing Regulation (EC) No 1698/2005 [2013] OJ L 347/487, Art. 28, Measure 10 (M10) (‘aims to preserve and promote the necessary changes to agricultural practices that make a positive contribution to the environment and climate’).

⁹⁷ See, generally, European Court of Auditors (ECA), *Greening: A More Complex Income Support Scheme, Not Yet Environmentally Effective* (European Union, 2017).

⁹⁸ Though some examples arguably do exist, such as a programme seeking to create green energy from pig manure: EU CAP Network, ‘Producing Green Energy from Pig Manure’, undated, available at: https://eu-cap-network.ec.europa.eu/good-practice/producing-green-energy-pig-manure_en.

⁹⁹ European Parliament, ‘Second Pillar of the CAP: Rural Development Policy’, *Fact Sheets on the European Union*, 2022, p. 4.

Overall, it is perhaps unsurprising that reported emissions removals during this CAP implementation period were underwhelming.¹⁰⁰ Against a backdrop of post-War agricultural productivism in the EU, the minimal integration of climate concerns into the CAP was not sufficient in reversing the path dependency of EU support for emissions-intensive agricultural commodities, such as livestock. In fact, a 2017 study for the EU Agri-Committee reported that dairy farmers were dependent on CAP payments for about 70% of their income, while for beef farms this share was more than 100%.¹⁰¹ Beyond the core provisions of the CAP, financial support was provided for the EU livestock sector on an ongoing basis to ensure its viability, including a number of exceptional aid packages in 2015 to 2016, which were largely implemented to insulate the EU dairy sector from global milk price drops.¹⁰²

While farmer livelihood protection is a core objective of the CAP,¹⁰³ the minimal climate improvements of previous CAP reforms arguably led to an increased prioritization of climate action in the most recent CAP reform negotiations.

As part of the most recent CAP reform, a ‘new Green Architecture’ for the CAP was introduced.¹⁰⁴ This new framework contains a number of elements intended to contribute towards better livestock emissions reduction in the EU. Firstly, a new ‘delivery mode’ for environmental commitments under the CAP began in 2023, with a greater shift towards ‘results-orientation’ than was previously the case under the CAP.¹⁰⁵ In CAP ‘Strategic Plans’ (CSPs), MS are required to plan and implement all chosen CAP interventions according to their national/regional needs and aligned to the nine CAP specific objectives. The first round of draft CSPs has now been published, and the Commission has sent observation letters on their contents where necessary.¹⁰⁶

A number of the new CAP specific objectives cover environmental and climate issues. These include, notably, ‘contribut[ing] to climate change mitigation and adaptation ... as well as to promote sustainable energy’.¹⁰⁷ Additionally, a condition of the new CAP Strategic Planning approach is the requirement for MS to demonstrate a higher level of ambition for the environment and climate under the CAP 2021–27 period than is currently set.¹⁰⁸

¹⁰⁰ E.g., one study’s simulation of emissions reductions suggests that emissions could have been 26.2 million tonnes higher without the impact of those CAP measures for those which they simulated a quantified result. Of the avoided emissions, 20.2 million tonnes of CO₂ equivalent (Mt CO₂ eq) are covered under LULUCF reporting and attributable to cropland and grazing land management, with the remaining 6 Mt CO₂ eq accounted for by reductions in emissions of N₂O and CH₄: Mottershead et al., n. 54 above, p. 93.

¹⁰¹ Ihle et al., n. 15 above.

¹⁰² See, e.g., European Commission, ‘European Commission Activates Exceptional Measures to Further Support European Farmers in Crisis’, Press Release IP/16/806, 14 Mar. 2016.

¹⁰³ See, e.g., Art. 39 TFEU, n. 24 above.

¹⁰⁴ CAP Strategic Plans Regulation, n. 58 above, Art. 109(2).

¹⁰⁵ N. Lamplin et al., ‘Using Eco-Schemes in the New CAP: A Guide for Managing Authorities’, IFOAM EU Group et al., 2020.

¹⁰⁶ The new CAP catalogue to view all CAP interventions is available at: https://agridata.ec.europa.eu/extensions/DashboardCapPlan/catalogue_interventions.html.

¹⁰⁷ CAP Strategic Plans Regulation, n. 58 above, Art. 6(1)(d).

¹⁰⁸ See *ibid.*, Art. 105, for more on the ‘no backsliding’ requirement.

A new Performance Monitoring and Evaluation Framework (PMEF) was created to assess how the CSPs are contributing to the CAP general and specific objectives and the overall performance of the policy.¹⁰⁹ Under this PMEF, an annual review process takes place between the MS managing authority and the Commission. The Commission has to approve the CSP on the basis that the plan meets all EU requirements and is in line with the provisions of the relevant CAP regulations.¹¹⁰ Under this process, managing authorities must also submit an annual performance report to the Commission on the implementation of their CSP.¹¹¹ A monitoring committee consisting of national stakeholders is also made responsible for MS implementation of CSPs, including the attainment of targets set out in their plans.¹¹² CAP objectives, including those related to the environment and climate, are also accompanied by a common output, result and impact indicators that are intended to be used to monitor and evaluate the implementation of the CSPs, including reductions in livestock emissions.¹¹³

A key new feature of the new Green Architecture that is expected to be included in CSPs is the eco-scheme concept. This is a new opt-in instrument designed to reward farmers who choose to go ‘one step further’ in terms of environmental care and climate action – in other words, beyond the new enhanced conditionality requirements included in Annex 3 of the CAP Strategic Plans Regulation.¹¹⁴ Eco-schemes are voluntary in nature and do not replace these enhanced conditionality requirements or agri-environment-climate measures under Pillar 2 of the CAP.

Eco-schemes are fully financed by the EU (under Pillar 1) and therefore do not necessitate match funding from MS (unlike Pillar 2 rural development measures, which require national or regional co-financing).¹¹⁵ To be supported by eco-schemes, agricultural practices should (i) cover activities related to climate, environment, animal welfare, and antimicrobial resistance; (ii) be defined on the basis of the needs and priorities identified at national/regional levels in their CSPs; and (iii) their level of ambition has to go beyond the requirements and obligations set by ‘new, enhanced conditionality’ to contribute towards reaching the EGD targets.¹¹⁶

In a guidance document from the Commission about potential types of action or programme that could be funded as an eco-scheme, measures to mitigate emissions from enteric fermentation were included – the first explicit reference to the potential

¹⁰⁹ Ibid., Title VII.

¹¹⁰ Ibid., e.g., Art. 118.

¹¹¹ Ibid., Art. 134.

¹¹² Ibid., Art. 124.

¹¹³ Ibid., e.g., Art 7 and Annex 1. Result indicator R.13, in Annex I, monitors the share of livestock units in a MS that are supported under commitments to reduce emissions of GHG and/or ammonia, including manure – as potentially monitored by output indicator O.8 ‘numbers of hectares or of livestock units benefitting from eco-schemes’.

¹¹⁴ Ibid., Annex 3. These include enhanced SMRs and good agricultural and environmental conditions (GAECs); see H. Guyomard et al., ‘How the Green Architecture of the 2023–2027 Common Agricultural Policy Could Have Been Greener’ (2023) 52 *Ambio*, pp. 1327–38.

¹¹⁵ For more on payments for eco-schemes see CAP Strategic Plans Regulation, n. 58 above, Art. 31(7).

¹¹⁶ Ibid., Art. 31(4).

role of reducing emissions for enteric fermentation to achieve livestock emissions reductions in CAP documents.¹¹⁷

However, as mentioned, some concerns have already been raised by the Commission with regard to the published draft CSPs. For example, variance has been noted across the draft reports and, still, the livestock sector appears to dominate the use of voluntary coupled support, as in previous CAP periods.¹¹⁸ Most worryingly, the Commission highlights that the proposed plans largely ignore the importance of reducing methane emissions from livestock, despite the intended focus of the reform to address climate change.¹¹⁹ These are only draft plans, and there is the opportunity (and, indeed, obligation) for MS to revise them in the light of the Commission's comments.¹²⁰ Despite the stated climate ambitions of the reform, historical path dependencies of past CAP periods characterized by protection of the livestock sector remain visible.¹²¹

3.2. *The Farm to Fork Strategy*

The EU's Farm to Fork Strategy aims to make EU food systems 'fair, healthy and environmentally friendly'.¹²² The Strategy is a new integrated and comprehensive approach to EU food systems, covering broad areas of EU policy relevant to food systems, such as agricultural policy, environmental policy, and consumer protection.

The Strategy is in its early stages of implementation,¹²³ but some plans related to production or supply side improvements in livestock production have been articulated in the Strategy. For example, the Commission states it will:

facilitate the placing on the market of sustainable and innovative feed additives ... [and] examine EU rules to reduce dependency on critical feed materials (e.g. soya grown on deforested land) by fostering EU-grown plant proteins as well as alternative feed materials such as insects, marine feed stocks (e.g. algae) and by-products from the bio-economy (e.g. fish waste).¹²⁴

These plans pick up on some of the shortcomings identified in analysis and critique of the previous CAP iteration, such as a lack of incentives to grow sustainable feedstock domestically.¹²⁵ A number of preliminary developments have been made in this respect,

¹¹⁷ European Commission, 'Sustainable Agricultural Practices and Methods: List of Potential Agricultural Practices that Eco-Schemes Could Support', available at: https://agriculture.ec.europa.eu/sustainability/environmental-sustainability/sustainable-agricultural-practices-and-methods_en.

¹¹⁸ European Commission, n. 60 above, p. 9.

¹¹⁹ *Ibid.*, p. 23.

¹²⁰ CAP Strategic Plans Regulation, n. 58 above, Art. 118(3).

¹²¹ See European Commission, n. 60 above, p. 5 (where the Commission generally also highlights the incompleteness of some MS submissions – noting that many MS failed to reflect and address certain specific country challenges in their plans).

¹²² Farm to Fork Strategy, n. 25 above.

¹²³ For more on its deficiencies to date see H. Schebesta, 'How to Save the Farm to Fork Strategy: A Two-Phased Approach' (2023) 18(4) *European Food and Feed Law Review*, pp. 231–8.

¹²⁴ Farm to Fork Strategy, n. 25 above, p. 7.

¹²⁵ For more on protein crop growth in the EU see European Commission, 'Report from the Commission to the Council and the European Parliament on the Development of Plant Proteins in the European Union',

including the EU's first approval of a feed additive to reduce the methane emissions produced by cattle,¹²⁶ and the new Due Diligence Regulation¹²⁷ analyzed in Section 3.3 below.

Emissions reduction strategies under the Farm to Fork Strategy also focus on integrating public health concerns and the concept of 'sustainable diets' with emissions mitigation. For example, the Strategy references the role of 'sustainable diets' in achieving climate goals in the EU.¹²⁸ It highlights that the average intake of red meat in the EU exceeds recommendations, and consumption of healthy alternatives are below the level they should be.¹²⁹ Obesity rates in the EU are emphasized, and a more plant-based diet with less red and processed meat is highlighted as not only capable of reducing risks of life-threatening diseases (such as cardiovascular disease and cancer), but also having environmental benefits.¹³⁰

The Strategy suggests a number of pathways for achieving this sustainable and healthy diet synergy, including through the provision of clear information to make it easier for consumers to choose healthy and sustainable diets that will benefit health and quality of life.¹³¹ The Commission will propose harmonized mandatory front-of-pack nutrition labelling,¹³² and will consider proposing the extension of compulsory origin indications for certain products.¹³³ The Commission will also seek to harmonize voluntary green claims in the food sector and to create a sustainable labelling framework that covers the nutritional, climate, environmental, and social characteristics of food products.¹³⁴ Other measures relating to more sustainable public procurement, and reviewing the sustainability of EU school schemes,¹³⁵ are also

COM(2018) 757 final, 22 Nov. 2018 (e.g., it is stated that the EU only has 5% self-sufficiency for soya crops: *ibid.*, p. 2).

¹²⁶ G. Fortuna, 'Farm to Fork: EU Approves First Methane-Busting Feed Additive for Cattle', *Euractiv*, 23 Feb. 2022, available at: <https://www.euractiv.com/section/agriculture-food/news/from-burp-to-fork-eu-approves-first-methane-busting-feed-additive-for-cattle>.

¹²⁷ N. 86 above.

¹²⁸ Farm to Fork Strategy, n. 25 above, from p. 13.

¹²⁹ *Ibid.*

¹³⁰ *Ibid.* This is in line with broader literature on sustainable diet modelling; see W. Willett et al., 'Food in the Anthropocene: The EAT–Lancet Commission on Healthy Diets from Sustainable Food Systems' (2019) 393(10170) *The Lancet*, pp. 447–92.

¹³¹ Farm to Fork Strategy, n. 25 above, e.g., p. 13.

¹³² The Commission is preparing a proposal to revise Regulation (EU) No 1169/2011 on the Provision of Food Information to Consumers [2011] OJ L 304/18. Status and details of the Commission proposal are available at: https://food.ec.europa.eu/safety/labelling-and-nutrition/food-information-consumers-legislation/proposal-revision-regulation-fic_en. Some have called for the Commission to use the Nutri-Score nutrition label in this revision; see, e.g., 'Harmonised and Mandatory Nutrition Labelling in the EU', Priority Question for Written Answer P-000783/2023 to the Commission by Member of European Parliament (MEP) Antonius Manders, 8 Mar. 2023, available at: https://www.europarl.europa.eu/doceo/document/P-9-2023-000783_EN.html; and the written answer thereto by Commissioner Stella Kyriakides, 20 Apr. 2023, available at: https://www.europarl.europa.eu/doceo/document/P-9-2023-000783-ASW_EN.html. More information on Nutri-Score is available at: <https://nutriscore-europe.com>.

¹³³ Farm to Fork Strategy, n. 25 above, p. 13.

¹³⁴ *Ibid.*

¹³⁵ This includes the EU School Milk Programme, which subsidizes the costs of milk for children, though with no preference given to sustainably produced, high quality, or local dairy; see Art. 26 of

provided for.¹³⁶ Lastly, the Commission proposes to use tax incentives to make food systems more sustainable and encourage consumers to choose sustainable and healthy diets.¹³⁷ So far, the European Parliament has voted in favour of enabling MS to introduce a 0% value added tax (VAT) rate for healthy and sustainable food, such as fruits and vegetables.¹³⁸ It also highlights that EU taxes should aim to ensure that the prices of different foods reflect their true costs, including environmental externalities such as GHG emissions.¹³⁹

While already facing some criticism and concern,¹⁴⁰ the Farm to Fork strategy provides details on the types of agri-environmental policy to be monitored in internal policymaking in the coming years to target the emissions impact of both livestock production and consumption in the EU. In addition to this package of measures, external policies are also being introduced to address the EU's responsibility for its forestry footprint for agriculture globally, for example, through the EU Due Diligence Regulation.¹⁴¹

3.3. The EU Due Diligence Regulation

A new Regulation has been introduced in the EU mandating due diligence requirements for FERC traders placing these goods on the EU market.¹⁴² The content of the Regulation has the potential to mitigate the EU's external forest footprint, as its scope includes soy for feedstock imported into the EU market, in addition to other FERCs, such as cattle.¹⁴³

Drawing inspiration¹⁴⁴ from the timber-focused Forest Law Enforcement, Governance and Trade (FLEGT) Regulation,¹⁴⁵ the new Due Diligence Regulation requires all companies selling FERCs (including soy and beef) on the EU market to complete due diligence to demonstrate that these goods have not been illegally

Regulation (EU) No 1308/2013 establishing a Common Organisation of the Markets in Agricultural Products and repealing Regulations (EEC) No 922/72, (EEC) No 234/79, (EC) No 1037/2001 and (EC) No 1234/2007 [2013] OJ L 347/671.

¹³⁶ Farm to Fork Strategy, n. 25 above, p. 14.

¹³⁷ Ibid.

¹³⁸ See more on the voting details here: https://emeeting.europarl.europa.eu/emeeting/committee/en/agenda/202109/ENVI?meeting=ENVI-2021-0831_1&session=09-01-09-00.

¹³⁹ Farm to Fork Strategy, n. 25 above, p. 14.

¹⁴⁰ Schebesta, n. 123 above; C. Boix-Fayos & J. de Vente, 'Challenges and Potential Pathways towards Sustainable Agriculture within the European Green Deal' (2023) 207(Apr) *Agricultural Systems*, article 103634; H. Schebesta et al., 'Tour de Table: Farm to Fork Law Update' (2022) 17(3) *European Food and Feed Law Review*, pp. 208–18.

¹⁴¹ N. 86 above.

¹⁴² Ibid.

¹⁴³ See a full list of these commodities in the Due Diligence Regulation, n. 86 above, Art. 1.

¹⁴⁴ Though still remaining a separate piece of legislation, because of its focus on timber rather than FERCs more broadly, including livestock goods.

¹⁴⁵ For a positive analysis of the FLEGT+ regime see J. Zeitlin & C. Overdevest, 'Experimentalist Interactions: Joining up the Transnational Timber Legality Regime' (2020) 15(3) *Regulation & Governance*, pp. 686–708. For a more critical assessment see R. Myers et al., 'Imposing Legality: Hegemony and Resistance under the EU FLEGT+ Initiative' (2020) 27(1) *Journal of Political Ecology*, pp. 125–49.

grown or harvested, or caused any forest degradation or deforestation.¹⁴⁶ Companies must complete varying levels of due diligence depending on the risk rating attached to different producer countries, based on deforestation data verified through satellite monitoring,¹⁴⁷ producer country legal frameworks, countries' deforestation pledges, and bilateral agreements between the EU and third countries.¹⁴⁸ Existing certification or other third-party verified schemes can be used as a source of information in only the risk assessment procedure and cannot be used as a substitute for the operator's responsibility to conduct due diligence, with sanctions existing for companies that are found to be selling illegal or forest-degrading products.¹⁴⁹

As with other proposals and strategies outlined in this article, the success of the Regulation will depend on its implementation.¹⁵⁰ Nonetheless, it is encouraging that the regulatory gap surrounding agricultural imports under the CAP and the EU's broader agri-environmental regime has attempted to be addressed so directly by EU policymakers. Moreover, the EU's full responsibility for climate change is better addressed through this recognition and action being taken on forest-related emissions stemming from its agricultural consumption beyond its borders.

Having provided numerous examples of where the EU has sought to make its agricultural policies more climate-friendly, the following section benchmarks this agri-climate governance evolution – highlighting the disconnect between EU policies on paper and the practical reality of fundamentally restructuring EU food systems.

4. Benchmarking EU Agri-Climate Governance

Despite the inefficiencies noted above, the EU approach to addressing livestock emissions may be argued to be comparatively innovative with regard to (i) technical solutions, and (ii) taking a food system approach. The EU position will be benchmarked against that of other global actors by relying on existing studies, such as that from the Food and Agriculture Organization of the United Nations (FAO),¹⁵¹ while noting the methodological limitations of these studies.¹⁵²

4.1. Technical Solutions

Technical livestock solutions are measures to reduce the emissions intensity of production on the supply side, including altering feedstock composition to reduce emissions from enteric fermentation or using more efficient dual-utilization cattle

¹⁴⁶ Due Diligence Regulation, n. 86 above, Art. 3.

¹⁴⁷ It is worth noting that concerns have been raised that the proposal would not consider human rights violations that often occur alongside deforestation in vulnerable forest areas; see more in Durán & Scott, n. 80 above, e.g., p. 257.

¹⁴⁸ Due Diligence Regulation, n. 86 above, Art. 8 outlines what due diligence entails under the Regulation.

¹⁴⁹ *Ibid.*, Recital 52.

¹⁵⁰ See generally Durán & Scott, n. 80 above.

¹⁵¹ R. Strohmaier et al., *The Agriculture Sectors in the Intended Nationally Determined Contributions: Analysis*, Environment and Natural Resources Management Working Paper 62 (FAO, 2016), p. 5.

¹⁵² E.g., while NDCs provide useful insight into national climate priorities (thereby necessitating their inclusion in pre-COP NDC synthesis reports), NDCs do vary in length and content.

breeds. For the purpose of this benchmarking exercise, looking to international-level commitments for the agricultural sector provides useful insight into the general level of livestock-focused climate solutions pledged at the global level.¹⁵³ The UNFCCC regime utilizes production-based emissions accounting,¹⁵⁴ meaning that the implementation of technical livestock solutions in a producer state could contribute to its climate change mitigation targets.

Previous analysis of submitted NDCs indicates that generally livestock-focused climate commitments are sparse, particularly from developed country parties to the UNFCCC.¹⁵⁵ In the first round of NDCs submitted after the Paris Agreement's entry into force, the FAO reports that 148 of the 165 Paris parties included agriculture in their mitigation contributions¹⁵⁶ under their initial NDCs (71%, 88%, and 98% of developing countries, economies in transition, and developed countries, respectively).¹⁵⁷ Of the 69 NDCs that mentioned livestock, 19 highlighted concrete measures referring to 'feed management' (10 parties) and 'breeding management' (5 parties); while 15 parties referred to 'manure management'.¹⁵⁸ The FAO states that 54% of parties did not expand beyond simply including agriculture in their economy-wide emissions target to create more targeted mitigation policies, such as those for national livestock sectors.¹⁵⁹ Moreover, no developed country party was reported to refer to livestock in their first NDC and none of the largest global agricultural emitters included agricultural sector-specific contributions in their first submitted pledges.¹⁶⁰

The coverage of the livestock sector in NDCs has arguably improved as awareness and political interest in addressing the impact of the livestock sector on the climate has increased. The World Wide Fund for Nature (WWF) analyzed updated NDCs following a similar methodology to the FAO,¹⁶¹ reporting that 63 updated NDCs have mitigation measures that explicitly consider livestock, a 133% increase from 27 on previous NDCs.¹⁶² This increase is promising, though other areas of agri-environmental governance are still gaining more traction – despite the disproportionate impact

¹⁵³ Though it is worth noting that NDCs do not always indicate the extent of livestock action being taken at the national level as the content of NDCs does not necessarily include all action being taken nationally in relation to specific sectors. This being said, NDCs play a valuable role in showcasing, stocktaking, and peer review of a state's progress in meeting its climate commitments.

¹⁵⁴ For more on production against consumption-based accounting method usage in relation to the UNFCCC see G. Peters, 'From Production-Based to Consumption-Based National Emissions Inventories' (2008) 65(1) *Ecological Economics*, pp. 13–23.

¹⁵⁵ E.g., see Strohmaier et al., n. 151 above.

¹⁵⁶ More on the methodology used in the FAO report can be found in Strohmaier et al., n. 151 above, Section 1.2. For the study, each intended NDC was studied in full text to ensure a comprehensive assessment of the coverage of the agriculture sectors in this report. Original text was extracted into a database, which facilitates the replication and re-examination of the screening process. The data was cross-checked using a keyword search in English, French, and Spanish.

¹⁵⁷ Strohmaier et al., n. 151 above, p. 5.

¹⁵⁸ *Ibid.*, p. 14.

¹⁵⁹ *Ibid.*, p. 13.

¹⁶⁰ *Ibid.*, p. 14.

¹⁶¹ A keyword search was undertaken across the 134 updated NDCs, with further details of the keyword assessment detailed in Annex 2; see WWF, *Unlocking and Scaling Climate Solutions in Food Systems: An Assessment of Nationally Determined Contributions* (WWF, 2022).

¹⁶² *Ibid.*, pp. 5–6.

of livestock on the production of GHG emissions. For example, the WWF reports that 101 updated NDCs include *adaptation* measures for agriculture – over 60% more than those that have mitigation measures that explicitly consider livestock in their NDCs.¹⁶³

With regard to technical livestock solutions, the EU has made promising developments compared with developed economies with similar productivist agricultural models. For example, the provision of measures relating to enteric fermentation in the Commission's guidance for creating eco-schemes in the new CAP implementation period demonstrates an avenue for the intensity of production of livestock emissions to be addressed.¹⁶⁴ Moreover, the EU Commission has linked the EU's overall methane strategy with the CAP and Farm to Fork.¹⁶⁵ The Commission states it will also encourage MS to include methane reduction schemes in their strategic plans for the CAP.¹⁶⁶ It has highlighted effective ways of reducing the intensity of emissions from enteric fermentation, such as improving the health and fertility of the herds, improving animal diets (mix of feed materials), using feed additives, and improving feeding techniques.¹⁶⁷ The methane strategy also exemplifies the Farm to Fork Strategy's 'novel approaches to feeding' as an avenue to reducing methane emissions, such as fostering EU-grown plant proteins as well as alternative feed materials such as insects, marine feedstocks (for example, algae), and by-products from the bio-economy (for example, fish waste).¹⁶⁸

These fledgling policies in the EU relating to technical livestock solutions are still under development and their impact is therefore not yet secured. Nevertheless, the evolution of existing EU agricultural policies (such as the CAP) in addition to newer developments in agri-climate governance (such as Farm to Fork) demonstrates the EU's ongoing drive to meet its technical climate responsibilities for the livestock sector – particularly against a historical backdrop of inaction for the sector highlighted in the FAO analysis of NDCs.

4.2. Food Systems Approach

The EU's ambition to address its climate responsibilities related to the livestock sector is particularly clear in its recognition of the need for a 'food systems approach' to tackling livestock emissions. A food systems approach refers to an approach that 'analyses the relationships between the different parts of the food system and the outcomes of activities within the system in socio-economic and environmental/climate terms'.¹⁶⁹

¹⁶³ Ibid.

¹⁶⁴ European Commission, 'Commission Publishes List of Potential Eco-Schemes', 14 Jan. 2021, available at: https://ec.europa.eu/info/news/commission-publishes-list-potential-eco-schemes-2021-jan-14_en.

¹⁶⁵ European Commission, Communication, 'An EU Strategy to Reduce Methane Emissions', COM(2020) 663 final, 14 Oct. 2020, e.g., pp. 12–3.

¹⁶⁶ Ibid., p. 13.

¹⁶⁷ Ibid., p. 12.

¹⁶⁸ Ibid.

¹⁶⁹ For more on the food systems approach see S. van Berkum, J. Dengerink & R. Ruben, 'The Food Systems Approach: Sustainable Solutions for a Sufficient Supply of Healthy Food', Wageningen Economic Research, June 2018.

The concept of a ‘food system’ has rapidly evolved away from simplistic consideration of producers and consumers. A newer and more ‘holistic’ concept of a food system is one that:

integrates all the elements (environment, people, inputs, processes, infrastructures, institutions, etc.) and activities that relate to the production, processing, distribution, preparation and consumption of food, and the output of these activities, including socio-economic and environmental outcomes.¹⁷⁰

In relation to the livestock sector, a food systems approach extends beyond technical solutions to livestock emissions (such as feed additives) to include broader socio-economic drivers of these emissions (such as diet or food waste).¹⁷¹ In particular, this approach includes healthiness and sustainability, thereby promoting less resource-intensive (and more nutritious) consumption in the EU.¹⁷²

EU policies such as Farm to Fork or its new Due Diligence Regulation are particularly focused on the demand-side of EU agricultural consumption – whether that be related to diet or EU imports. The EU’s Farm to Fork Strategy incorporates this food system approach, making reference to food sustainability labelling schemes, rethinking biases in CAP pay-out programmes for more resource-intensive dietary components, and reducing tax on healthy dietary components.¹⁷³ With regard to recognizing the role of EU consumption of agricultural goods in driving emissions from deforestation in third countries, the EU’s new Due Diligence Regulation for FERCs begins to address the sustainability of EU agricultural supply chains and consumption of livestock goods, such as soy for feedstock.¹⁷⁴

This food systems approach to tackling sustainable diets in these ways is a particular aspect of EU agri-climate governance that benchmarks it as a more ambitious future global actor for livestock emissions mitigation. At COP-27, during the negotiation of the Sharm El Sheikh joint work on implementation of climate action on agriculture and food security,¹⁷⁵ the EU pushed for a food systems approach to the Decision.¹⁷⁶

¹⁷⁰ For a comprehensive literature review of food systems research see C. Béné et al., ‘Understanding Food Systems Drivers: A Critical Review of the Literature’ (2019) 23(Dec) *Global Food Security*, pp. 149–59.

¹⁷¹ For more on these types of strategy see S. Caleffi, C. Hawkes & S. Walton, ‘45 Actions to Orient Food Systems towards Environmental Sustainability: Co-Benefits and Trade-Offs’, Centre for Food Policy, Feb. 2023.

¹⁷² The FAO outlines what this healthy and sustainable diet could entail – largely greater volumes of plant-based proteins, wholegrains, and fruits and vegetables, with less consumption of red and processed meats: C. Gonzalez Fischer & T. Garnett, *Plates, Pyramids, Planet: Developments in National Healthy and Sustainable Dietary Guidelines: A State of Play Assessment* (FAO, 2016), e.g., p. 15.

¹⁷³ See previous discussions in this article, in addition to Farm to Fork Strategy, n. 25 above, pp. 12–3.

¹⁷⁴ See previous discussions in this article, in addition to Fern, ‘Landmark EU Anti-Deforestation Law Proposal Could Clean Up Supply Chains: Could It Also Reduce Global Deforestation?’, 17 Nov. 2021, available at: <https://www.fern.org/de/publications-insight/landmark-eu-anti-deforestation-law-proposal-could-clean-up-supply-chains-could-it-also-reduce-global-deforestation-2431>.

¹⁷⁵ Decision 3.CP/27, n. 79 above.

¹⁷⁶ Carbon Brief, ‘COP27: Key Outcomes for Food, Forests, Land and Nature at the UN Climate Talks in Egypt’, *Carbon Brief*, 24 Nov. 2022, available at: <https://www.carbonbrief.org/cop27-key-outcomes-for-food-forests-land-and-nature-at-the-un-climate-talks-in-egypt>.

Carbon Brief noted that taking this ‘whole food systems approach’ was a key dividing element between countries that already have language around food systems in their domestic policies, such as the EU’s Farm to Fork Strategy, against countries that were either unclear or reluctant to talk about aspects such as consumption and diets. This divisiveness was attributed to tensions around the implied reductions in meat consumption required from this approach, in addition to a ‘lack of clarity’ surrounding food systems language.¹⁷⁷ Some developing regions also viewed the inclusion of ‘whole food systems’ language as an implied curtailing of domestic agricultural expansion in the Decision’s mandate.¹⁷⁸ In the end, the food systems approach language was deleted from the text.¹⁷⁹ However, the EU negotiating stance demonstrates its aspiration for global alignment with its own policies, such as Farm to Fork, that take a fuller food systems approach to tackling livestock emissions.

Beyond this, looking to NDCs and their inclusion of strategies such as dietary change as a benchmark for EU agri-climate governance, the EU can, once again, be seen to be ambitious in addressing dietary change in an innovative food systems approach to livestock emissions. The WWF analysis of updated NDC submissions saw a general increase in consideration of post-harvest demand-side mitigation policies, such as reducing food waste. For example, 36 updated NDCs consider post-harvest food measures; a 71% increase compared with 21 previous NDCs was reported.¹⁸⁰ Nineteen updated NDCs consider food waste reduction, compared with only three parties in their previous NDCs.¹⁸¹ This being said, according to the WWF analysis, only five NDCs made reference to dietary change as a potential post-harvest emissions solution – largely from developing countries using diet as an adaptation strategy, rather than developed countries that typically consume more meat per capita.¹⁸²

The COP negotiations surrounding dietary change for the Sharm el Sheikh decision demonstrate the contentious nature of these types of policy. Unsurprisingly, few countries are keen to address the ‘hot potato’ of dietary change in their national strategies for fear of political backlash.¹⁸³ While it is beyond the scope of this article to delve into the depths of all states’ climate and diet-related policies, the EU’s active creation and promotion of a full food systems approach that includes dietary change demonstrates the exceptional nature of the EU’s intended approach to agri-climate governance.

5. Conclusion: Possibilities and Caution

This article has demonstrated the development of the EU approach over time to governing the climate impacts of its agricultural sector, using the livestock sector as a case study on

¹⁷⁷ Ibid.

¹⁷⁸ Ibid.

¹⁷⁹ Ibid.

¹⁸⁰ WWF, n. 161 above, pp. 5–6.

¹⁸¹ Ibid.

¹⁸² Ibid.

¹⁸³ For an example of the contention around plant-based eating see D. Garcia, V. Galaz & S. Daume, ‘EATLancet vs Yes2meat: The Digital Backlash to the Planetary Health Diet’ (2019) 394(10215) *The Lancet*, pp. 2153–4.

account of its historical financial support from the EU and its climate impact. Firstly, the bases for the EU's climate responsibility were outlined. This included endogenous bases, such as the EU's internal climate mandate and the desire of EU MS to address climate issues, in addition to exogenous bases, such as international climate law obligations and broader moral arguments relating to the EU's climate responsibility. The recent evolutions in EU agri-climate governance were then outlined, including the increasing inclusion of climate considerations in the CAP, the development of the Farm to Fork Strategy, and the introduction of the new EU Due Diligence Regulation, which could tackle the sustainability of the EU's agricultural supply chains from deforestation risk areas. The EU's agri-climate governance for its livestock sector was then benchmarked against other global actors, making references to analysis of international climate plans and negotiations. From this analysis, it was determined that the EU was somewhat 'ahead of the curve' in terms of its design of newer agri-climate policies, such as the CAP, the Farm to Fork Strategy, and the new Due Diligence Regulation. This was the case for the EU mandating technical livestock solutions in these policies, in addition to more innovative and comprehensive food systems approaches to tackling livestock emissions to address its climate responsibility for the sector. However, this benchmarking exercise of the EU's agri-climate governance of its livestock sector is complicated by the fact that the majority of these policies are still under development. Potential risks include, firstly, that CAP plans from MS are falling short of the Commission's expectations for national livestock sectors, and progress on Farm to Fork promises has been slow.¹⁸⁴ Secondly, the accessibility of reliable due diligence over long supply chains can be difficult to secure, particularly in regions such as South America where domestic environmental forms of protection have been eroded under past administrations.¹⁸⁵

This points at general issues with trying to recalibrate food systems, both at the domestic level and globally.¹⁸⁶ Agricultural sectors are important mainstays in the EU and particularly in developing regions.¹⁸⁷ Moreover, dietary change is an issue that trickles down to the kitchen table, constrained by cultural and economic barriers to change.¹⁸⁸ Against a backdrop of strong agricultural tradition in the EU and powerful agricultural lobbies both in the EU and in hotspot regions for livestock production,¹⁸⁹

¹⁸⁴ Schebesta, n. 123 above; N. Foote, 'Leaked Commission Agenda Sounds Death Knell for Missing Farm to Fork Files', *Euractiv*, 16 Oct. 2023, available at: <https://www.euractiv.com/section/agriculture-food/news/leaked-commission-agenda-sounds-death-knell-for-missing-farm-to-fork-files>.

¹⁸⁵ See ClientEarth's consultation submission on EU illegal logging rules for a useful parallel of the issues arising with trying to alter long-scale supply chains in the forestry sector: ClientEarth, 'Position Paper Regarding EU Rules on Illegal Logging', Nov. 2020, available at: <https://www.clientearth.org/media/iljoaqaf/position-paper-etr-flegt-consultation.pdf>.

¹⁸⁶ For more on the identified trade-offs of food system transformation solutions see Caleffi, Hawkes & Walton, n. 171 above.

¹⁸⁷ FAO (ed.), *The State of Food and Agriculture: Livestock in the Balance* (FAO, 2009), pp. 32–52.

¹⁸⁸ For more on this see Williams, n. 20 above, e.g., pp. 17–20.

¹⁸⁹ See, e.g., D. De Lorenzo & R. Sherrington, 'Mapped: The Network of Powerful Agribusiness Groups Lobbying to Water Down the EU's Sustainable Farming Targets', *DeSmog*, 9 Dec. 2021, available at: <https://www.desmog.com/2021/12/09/network-agribusiness-chemicals-pesticides-lobbying-eu-sustainable-climate-farming>.

there are broader factors that complicate the implementation of these systematic changes.¹⁹⁰ Throughout the evolution of EU agri-climate governance, the structural path dependency of EU financial support for its livestock sector has been longstanding, and hampering efforts for EU agri-climate reform. Recent farmer protests throughout Europe only highlight the contention and resistance that structural shifts in EU agricultural policy will meet.¹⁹¹ The significant concessions since made by the Commission in response to these protests yet again show the willingness of EU policy makers to weaken environmental ambition to maintain the agricultural status quo.¹⁹²

Nevertheless, with anticipated slightly downward trends of meat consumption by European citizens¹⁹³ and concerns for climate change on the rise, there is arguably no better time for EU agri-environmental policies to broach the transition towards a global sustainable diet head-on with concurrent public health benefits. As a shift in EU rhetoric and climate responsibility surrounding the agricultural sector is being witnessed, increased attention should be paid to the EU and its positionality in global agri-climate policy-making trends.

This article suggests that EU efforts such as the Due Diligence Regulation can provide an example of the wide range of rulemaking for environmentally damaging commodities that exists in policymakers' 'toolkits' for addressing livestock emissions. In this sense, policymaking attempts by the EU in this area provide case studies of policies for the global agricultural economies to learn from – whether positively or negatively – in a similar vein to the global learning experience of emissions trading schemes.¹⁹⁴ Moreover, the EU as a developed region, with comparatively higher levels of consumption of 'luxury' dietary components such as meat, provides a useful case study of how more sustainable food systems could be approached globally when rapidly industrializing countries undergo the livestock revolution. Increasingly, high consumption of emissions-intensive components is likely to form the greatest challenges in reducing agricultural emissions in the future, because of the complex need to restructure food systems. As a result, despite its fledgling status, EU policymaking in

¹⁹⁰ E.g., see more on EU promotional funds supporting meat and dairy, despite CAP reforms, in S. Eräjää, 'Marketing Meat: How EU Promotional Funds Favour Meat and Dairy', Greenpeace, Apr. 2021, p. 1, available at: <https://www.greenpeace.org/static/planet4-eu-unit-stateless/2021/04/20210408-Greenpeace-report-Marketing-Meat.pdf>.

¹⁹¹ J. Henley, 'Why Are Farmers Protesting across the EU and What Can the Bloc Do about It?', *The Guardian*, 2 Feb. 2024, available at: <https://www.theguardian.com/environment/2024/feb/02/why-are-farmers-protesting-across-the-eu-and-what-can-the-bloc-do-about-it>.

¹⁹² This included postponing a land set-aside requirement of the CAP conditionality standards, and making this voluntary rather than mandatory; see more in European Commission, 'Commission Proposes Targeted Review of Common Agricultural Policy to Support EU Farmers', Press Release IP/24/1493, 15 Mar. 2024. Other concessions include scrapping the EU pesticide reduction plan; see more in J. Henley, S. Jones & L. Tondo, "'Symbol of Polarisation": EU Scraps Plans to Halve Use of Pesticides', *The Guardian*, 6 Feb. 2024, available at: <https://www.theguardian.com/environment/2024/feb/06/symbol-of-polarisation-eu-scraps-plans-to-halve-use-of-pesticides>.

¹⁹³ European Commission, 'EU Agricultural Outlook 2021–31: Consumer Behaviour to Influence Meat and Dairy Markets', 9 Dec. 2021, p. 5, available at: https://agriculture.ec.europa.eu/news/eu-agricultural-outlook-2021-31-consumer-behaviour-influence-meat-and-dairy-markets-2021-12-09_en.

¹⁹⁴ Biedenkopf, n. 22 above.

this area is a valuable focus of study to monitor in the future – both for its successes and failures – against the backdrop of its productivist history.

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