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Nollkaemper, A.

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International Law and the Agony of Animals in Industrial Meat Production

André Nollkaemper*

Abstract

International law leaves states and meat-producing corporations full freedom to annually subject billions of animals to extreme suffering during intensive meat production. In the last two decades, the World Organisation for Animal Health (WOAH) has taken the lead in developing international standards for animal welfare. WOAH alone will not be able to restrict the liberty of international law, given the fact that demanding legal standards may hinder the push to provide nutrients to a growing world population and given global diversity in socio-economic situations, consumer preferences for meat products and cultural values. However, the push to regulate meat production has received new impulses from international institutions that seek to address adverse impacts of industrial animal farming on human interests – in particular, global health, climate change and biodiversity. As yet, this has done little to restrain the freedom under international law to subject farm animals to suffering, but it has expanded the grounds for future global agreements to regulate industrial farming as well as the range of principles and institutions that together constitute the framework within which decisions on industrial meat production that may benefit animal welfare have to be taken.

1 Introduction

Every year, across the globe an estimated 80 billion animals are killed to provide meat for human consumption.¹ A large number of these animals live and die in farms where they are subjected to industrial management practices that aim to maximize

* Professor of Public International Law, University of Amsterdam, The Netherlands. Email: P.A.Nollkaemper@uva.nl.

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¹ Ritchie and Roser, 'Meat and Dairy Production', *Our World in Data* (2017), available at <https://our-worldindata.org/meat-production>. This number excludes seafood.

yields of output per animal.² Industrial animal farming continues to expand in order to meet the nutritional needs of a growing world population with rising incomes.³ This is a global process; states that could not produce the meat and animal feed needed for domestic consumption have invested in, and traded with, meat producers in other states, resulting in what Jeremy Rifkin calls a ‘global cattle complex’.⁴ This global process is driven by states that seek to guarantee access of their populations to (cheap) meat; multinational corporations, hidden behind a multiplicity of retail brands;⁵ and consumers who overwhelmingly opt for cheap and accessible meat.⁶ Industrial meat production is ubiquitous in North America and Europe,⁷ and it has expanded to other regions. In most of Africa, meat is overwhelmingly produced by smallholder farmers,⁸ but industrial meat production has a growing share of the market – in particular, in South Africa.⁹ In Asia, much production remains rural and agricultural based, but in China, industrial farming has become dominant.¹⁰ And while in Latin America too, the meat production process is diverse¹¹ and many states use the wide grasslands of the continent,¹² production has industrialized significantly in Argentina¹³ and Brazil.¹⁴

- ² H. Böll Stiftung, ‘Meat Atlas 2021: Facts and Figures About the Animals We Eat’, available at <https://eu.boell.org/en/MeatAtlas>; Liverani *et al.*, ‘Understanding and Managing Zoonotic Risk in the New Livestock Industries’, 121 *Environmental Health Perspectives (EHP)* (2013) 873; MacDonald, ‘CAFOs: Farm Animals and Industrialized Livestock Production’, in R.W. Hazlett (ed.), *The Oxford Encyclopedia of Agriculture and the Environment* (2020); Cronin, Rault and Glatz, ‘Lessons Learned from Past Experience with Intensive Livestock Management Systems’, 33 *Revue Scientifique et Technique (RST)* (International Office of Epizootics) (2014) 139.
- ³ The production of meat is projected to increase to 455 million tons by 2050. See Silva, ‘Feeding the World in 2050 and Beyond – Part 1: Productivity Challenges’ (2018), available at www.canr.msu.edu/news/feeding-the-world-in-2050-and-beyond-part-1; Organisation for Economic Co-operation and Development (OECD) / Food and Agriculture Organization (FAO), *OECD – FAO Agricultural Outlook 2022–2031* (2022).
- ⁴ J. Rifkin, *Beyond Beef: The Rise and Fall of the Cattle Culture* (1992), at 145.
- ⁵ For the poultry sector, see Böll Stiftung, *supra* note 2, at 24. Examples are Cargill, which is based in the USA but active in Asia (with poultry supply chains in China, Indonesia, Philippines and Thailand), Europe (with processing facilities in France, Poland and the United Kingdom) and Latin America (poultry production in Honduras, Guatemala, Nicaragua, Costa Rica and Colombia). See Cargill, ‘What Matters Most. 2022 Annual Report’, available at www.cargill.com/doc/1432215917376/2022-cargill-annual-report.pdf. For information on Charoen Pokphand Foods PLC, based in Thailand, with investments in the agro-industrial and food business in 17 other states on four continents, see ‘Charoen Pokphand Foods PCL. Worldwide’, available at www.cpfworldwide.com/en/investors-map.
- ⁶ Bonnet *et al.*, ‘Viewpoint: Regulating Meat Consumption to Improve Health, the Environment and Animal Welfare’, 97 *Food Policy* (2020) 101847.
- ⁷ Böll Stiftung, *supra* note 2.
- ⁸ Fraser, ‘Toward a Global Perspective on Farm Animal Welfare’, 113 *Applied Animal Behaviour Science* (2008) 330.
- ⁹ Magakoe, ‘Raising the Steaks: Africa’s Booming Meat Industry’, *African Business* (14 March 2019), available at <https://african.business/2019/03/economy/raising-the-steaks-africas-booming-meat-industry/>.
- ¹⁰ Nizamuddin and Rahman, ‘Animal Welfare in Asia: Specific Flaws and Strengths, Future Trends and Objectives’, in S. Hild (ed.), *Animal Welfare: From Science to Law* (2019) 109.
- ¹¹ Huertas, Gallo and Galindo, ‘Drivers of Animal Welfare Policy in the Americas’, 33 *RST* (2014) 67.
- ¹² N. Shannon, ‘What Does Sustainable Living Look Like: Maybe Like Uruguay’, *New York Times* (10 May 2022), available at www.nytimes.com/2022/10/05/magazine/uruguay-renewable-energy.html.
- ¹³ ‘Change on the Pampas: Industrialized Farming Comes to Argentina’, *NACLA*, available at <https://nacla.org/news/change-pampas-industrialized-farming-comes-argentina>.
- ¹⁴ S. Sharma, ‘The Rise of Big Meat: Brazil’s Extractive Industry Executive Summary’, *IAT*, available at <https://www.iatp.org/documents/rise-big-meat-brazils-extractive-industry-executive-summary>

During industrial meat production, cattle, pigs, poultry and sheep live and die in unspeakable agony.¹⁵ Animals share overcrowded spaces or are isolated in narrow cages, leading to stress, aggression and the inability to display natural behaviour, and they experience additional suffering during transport and slaughter. Yuval Noah Harari has observed that ‘modern industrial agriculture might well be the greatest crime in history’.¹⁶ Ezra Klein titled his article in the *New York Times*: ‘We Will Look Back on This Age of Cruelty to Animals in Horror’.¹⁷

International law has been agnostic to the suffering of animals and has facilitated rather than constrained the expansion of industrial meat production. International financial institutions, investment agreements and international trade law have made it easier for states and corporations to industrialize meat production, grow animal feed and trade in meat products. They have provided states and corporations access to land, labour and resources and allowed them to optimize yields and minimize costs.¹⁸ As a result, more and more meat has been produced for more people. This may have been beneficial for meeting the nutritional needs of people, but it has also resulted in more suffering for more animals.

While, across the world, compassion with farm animals had induced national animal welfare laws, it is only in the past two decades that we have seen initiatives for global standards that match the global nature of the process of meat production.¹⁹ The World Organisation for Animal Health (WOAH) has played a leading role in this process.²⁰ In 2002, it became the first global organization with a mandate to protect animal welfare,²¹ and, in 2005, it incorporated animal welfare standards in the Terrestrial Animal Health Code (TAHC) that now is the most authoritative and comprehensive international set of standards for the protection of farm animals.²²

¹⁵ For an overview of animal welfare challenges in intensive meat production, see Cronin, Rault and Glatz, *supra* note 2, at 153.

¹⁶ Y. Harari, ‘Industrial Farming Is One of the Worst Crimes in History’, *The Guardian* (25 September 2015).

¹⁷ E. Klein, ‘Opinion: We Will Look Back on This Age of Cruelty to Animals in Horror’, *New York Times* (16 December 2021), available at www.nytimes.com/2021/12/16/opinion/factory-farming-animals.html.

¹⁸ See section 2.

¹⁹ Ransom, ‘The Rise of Agricultural Animal Welfare Standards as Understood through a Neo-Institutional Lens’, 15 *International Journal of Sociology of Food and Agriculture* (2007) 26, at 31.

²⁰ In 1924, the World Organisation for Animal Health (WOAH) was set up as the International Agreement for the Creation of an Office International des Épizooties (OIE). The organization used the name OIE – also in English-language documents – until May 2022, when the organization started to use the new name and acronym to provide more clarity to its mandate. See ‘The World Organisation for Animal Health Launches Its Refreshed Brand Identity’, *WOAH Bulletin*, available at https://bulletin.woah.org/?official=09-0-2-2022-2_rebranding. In this article, I will use the name WOAH, but for older documents that used the initial name, I still will refer to OIE.

²¹ ‘Strategy’, *OIE – World Organisation for Animal Health*, available at www.oie.int/en/who-we-are/strategy/. See further section 3.

²² Terrestrial Animal Health Code (TAHC) 2023, available at <https://www.woah.org/en/what-we-do/standards/codes-and-manuals/terrestrial-code-online-access/>, Art. 7.1.1. WOAH published the first edition in 1968; this edition as well as all later editions until 2004 were only concerned with animal health. For a rare discussion, see Peters, *Animals in International Law* (2021), at 85–97.

Additional animal welfare standards have been adopted at the regional level – above all in Europe but also in Africa, the Americas and Asia.²³

However, concern over animal welfare has proven to be a thin basis for a global legal regime that would limit the liberties of states to permit practices that entail massive animal suffering. Any attempt to introduce international animal welfare standards that could reduce the supply of meat and/or increase its price runs counter to the ongoing push to provide accessible meat for the world population. Moreover, worldwide differences in socio-economic situations, consumer preferences and the value attached to animal welfare are not conducive to an agreement on global legal constraints on meat production. Condemnation of animal suffering is shared across cultures and legal systems, but, once the question is asked how much suffering is acceptable in a concrete context and how this has to be balanced against the interests of food production and the economic interests of farmers and meat producers, one cannot assume that views on the regulation of animal welfare are universally shared. At least in the short term, states are unlikely to confer on WOAHP the power to put in place demanding legal standards based on the intrinsic value of animal welfare.

Paradoxically, the prospect for improved international legal protection for animals subjected to industrial farming does not depend so much on the value that states and consumers attach to animal welfare but, rather, on the value they attach to a range of other (human) interests that are affected by meat production.²⁴ The practice of industrial animal farming does not only harm animals but also impacts on the global economy, human health and climate change. States have tasked several international institutions to address such impacts. The World Trade Organization (WTO) incentivizes adherence to animal welfare standards for traded meat products. The World Health Organization (WHO) has recognized the need to address industrial meat production so as to protect human health.²⁵ The Conference of the Parties (COP) to the United Nations (UN) Framework Convention on Climate Change (UNFCCC) has pledged to reduce methane emissions, which could require reductions in the scale of the livestock industry.²⁶ And the UN Environment Programme (UNEP) aspires to reduce nitrogen pollution, which likewise could require reductions in the scale of intensive farming.²⁷ Individually and combined, these institutions operate on the basis of different legal principles and have at their disposal different legal powers and instruments than WOAHP. As a result, they may do what WOAHP cannot do: address broader causes of supply and demand for meat.

²³ See section 3.C.

²⁴ For the purpose of this article, I separate animal interests from human interests; obviously, the distinction is not clearcut. See M. Challenger, *How to Be Animal: A New History of What It Means to Be Human* (2021).

²⁵ Kinniburgh, 'Covid-19: How the Meat Industry Became a Global Health Liability', *France 24* (24 May 2020).

²⁶ Petrovic *et al.*, 'Meat Production and Consumption: Environmental Consequences', 5 *Procedia Food Science* (2015) 235; Schiermeier, 'Eat Less Meat: UN Climate-Change Report Calls for Change to Human Diet', 572 *Nature* (2019) 291.

²⁷ Kraham, 'Environmental Impacts of Industrial Livestock Production', in G. Steier and K.K. Patel (eds), *International Farm Animal, Wildlife and Food Safety Law* (2017) 3.

Adding the global economy, global health, climate change and biodiversity to the range of interests that must be addressed by the global regime for meat production does not automatically benefit animal welfare. Rather, they make the normative and institutional framework more complex. How the various actors assess and weigh the various interests associated with meat production depends on their specific situation and standpoint. They may see meat production as an activity to produce food, as an economic activity that sustains livelihoods of populations, as a process that poses a threat to the climate system and biodiversity, as an activity that may bring the next pandemic or as an exploitative process that makes animals suffer. These frames to some extent may overlap, but, in other respects, they conflict. Seeking to advance any one of these objectives (such as animal welfare) raises fundamental normative questions on the relationship, synergies and tensions with the other interests.

Our understanding of how, in this complex normative and institutional setting, WOAHA and other international institutions have contributed, and may contribute, to the development of international law that may benefit the welfare of farm animals is limited. Research on the role of international law in the protection of animals has generally focused on wild animals.²⁸ It is only recently – notably, in the emerging studies on global animal law – that research has considered the protection of domesticated animals, including those raised and slaughtered for feeding purposes.²⁹ To fill this gap, this article addresses the question of how WOAHA and institutions that are tasked with human-centred interests have expanded both the grounds and principles on which international standards that may benefit the welfare of farm animals can be based and the range of institutions and instruments that may contribute to the development of such standards.

In answering this question, I will draw on the insights developed in research on the development and diffusion of norms in regime complexes.³⁰ These insights allow us to identify the processes by which animal welfare standards have spread across international institutions (such as the norm-promoting role of WOAHA); the different weight attached to animal welfare in different institutions;³¹ and the ways in which multiple institutions combine to provide governance capabilities (normative guidance, regulatory instruments, technical expertise, enforcement capacity) in relation

²⁸ Glennon, 'Has International Law Failed the Elephant?', 84 *American Journal of International Law (AJIL)* (1990) 1; D'Amato and Chopra, 'Whales: Their Emerging Right to Life', 81 *AJIL* (1991) 121; more generally, M. Bowman, P. Davies and C. Redgwell, *Lyster's International Wildlife Law* (2nd edn, 2010).

²⁹ Peters, *supra* note 22; C.E. Blattner, *Protecting Animals within and across Borders: Extraterritorial Jurisdiction and the Challenges of Globalization* (2019); Otter, O'Sullivan and Ross, 'Laying the Foundations for an International Animal Protection Regime', 2 *Journal of Animal Ethics* (2012) 53; White, 'Into the Void: International Law and the Protection of Animal Welfare', 4 *Global Policy* (2013) 391.

³⁰ See, e.g., Gehring and Faude, 'The Dynamics of Regime Complexes: Microfoundations and Systemic Effects', 19 *Global Governance* (2013) 119; Zürn, Nollkaemper and Peerenboom, 'Introduction: Rule of Law Dynamics in an Era of International and Transnational Governance', in M. Zürn, A. Nollkaemper and R. Peerenboom (eds), *Rule of Law Dynamics in an Era of International and Transnational Governance* (2012) 1; Alter and Meunier, 'The Politics of International Regime Complexity', 7 *Perspectives on Politics* (2009) 13.

³¹ Zürn, Nollkaemper and Peerenboom, *supra* note 30.

to animal welfare that any single institution lacks.³² Through this lens, I will assess the practice of WOAHA and other international institutions, based on the legal texts and policy documents that they have adopted, information on the acceptance and implementation of such texts and policies by states and corporate meat producers and findings in interdisciplinary research on regulatory practices relating to industrial animal farming.

The article will first sketch in section 2 how international law has facilitated the global expansion of industrial meat production. Section 3 lays out the regime for protection of animal welfare at the global and regional level, highlighting the legal powers of WOAHA in relation to animal welfare and their limits, and the strengths and weaknesses of its international standards. Sections 4–6 then assess how the goals of animal welfare have been advanced by global institutions in the fields of the global economy, global health and the global environment, including climate change. Section 7 concludes and identifies building blocks for further development of the global regime for the welfare of farm animals.

2 The Liberties and Incentives of the International Law of Meat Production

For most of its history, international law had nothing to say on the production of meat and the treatment of farm animals. The production of meat was a domestic economic activity aimed at the supply of food for domestic consumption. International law did not concern itself with such production and left it to each state to set its own agricultural and food regulations and standards. In 2023, this is still a proper description of international law as it relates to meat production. Even though Harari speaks of the cruelty inflicted during industrial meat production as ‘the greatest crime in history’,³³ in legal terms, the practice is not an international crime and not even wrongful under international law. States are free to allow meat corporations to engage in industrialized farming, and thereby cause massive animal suffering, without breaching any international obligations. Proposals for a global treaty to restrain those liberties³⁴ have not come close to mustering the support needed to get them on any official agenda, and only in Europe have animal welfare treaties been concluded.³⁵ Given the diversity between regions and states, clearly no rule of customary law has emerged that would limit the freedom of states to practise industrial animal farming.

International law not only provides a liberty for industrial meat production and accompanying animal suffering, but it also has been instrumental in expanding such production. After World War II, the need to meet the nutritional needs of a growing population led to a worldwide push to intensify meat production. The concentration of

³² Dunoff, ‘A New Approach to Regime Interaction’, in M.A. Young (ed.), *Regime Interaction in International Law: Facing Fragmentation* (2012), at 136.

³³ Harari, *supra* note 16.

³⁴ Favre, ‘An International Treaty for Animal Welfare’, 18 *Animal Law* (2012) 237.

³⁵ See section 3.C.

large numbers of animals in housing units, the use of concentrated feed, vertical integration and industrial management practices³⁶ allowed states and agricultural corporations to achieve higher yields of output per unit of input.³⁷ International law was key to this process as it helped to create the conditions for industrial meat production across the globe and for the import and export of animals, meat and livestock feed. Part of this facilitating role of international law was the lending practices of international financial institutions.³⁸ Loans from the World Bank and the Inter-American Development Bank assisted governments across Latin America in converting rainforests and croplands to lands for raising cattle for the international beef market³⁹ and for growing cattle feed.⁴⁰ The International Monetary Fund and the World Bank made agricultural liberalization a condition of structural adjustment loans, thus facilitating the growth of meat production and meat exports.⁴¹ As Joseph E. Stiglitz noted, agricultural liberalization was 'imposed' primarily on developing countries 'in dire need of money'.⁴²

The supporting role of international financial institutions is not a remnant of the past. In the past 10 years, the International Finance Corporation (IFC) – the commercial lending arm of the World Bank – and the European Bank for Reconstruction and Development (EBRD) have provided US \$2.6 billion for pig, poultry and beef farming as well as for dairy and meat processing.⁴³ In total, around 2,500 investment banks, private banks and pension funds across the world invested a total of US \$478 billion in meat and dairy products between 2015 and 2020.⁴⁴ International investment agreements have contributed to the expansion of intensive meat production by creating favourable investment conditions; host states provided commitments to respect and protect investments in the meat production sector.⁴⁵ There

³⁶ Liverani *et al.*, *supra* note 2, at 873.

³⁷ Gilbert *et al.*, 'Review: Mitigating the Risks Posed by Intensification in Livestock Production: The Examples of Antimicrobial Resistance and Zoonoses', 15 *Animal: An International Journal of Animal Bioscience* (2021) 100123.

³⁸ A. Chadwick, *Law and the Political Economy of Hunger* (2019).

³⁹ Rifkin, *supra* note 4 at 147.

⁴⁰ *Ibid.*, 162.

⁴¹ Chadwick, *supra* note 38, at 39; Tzouvala and Knox, 'International Law of State Responsibility and COVID-19: An Ideology Critique', 39 *Australian Year Book of International Law Online* (2021) 105.

⁴² J.E. Stiglitz, *Globalization and Its Discontents* (2003) 244.

⁴³ Böll Stiftung, *supra* note 2; Wasley and Heal, 'Revealed: Development Banks Funding Industrial Livestock Farms around the World', *The Guardian* (2 July 2020). On the International Finance Corporation (IFC), see also 'World Bank's IFC Pumped \$1.8b into Factory Farming Operations since 2010', *Mongabay Environmental News* (7 July 2020), available at <https://news.mongabay.com/2020/07/world-banks-ifc-pumped-1-8b-into-factory-farming-operations-since-2010>.

⁴⁴ 'Butchering the Planet: The Big-Name Financiers Bankrolling Livestock Corporations and Climate Change', *Feedback* (2020), available at <https://feedbackglobal.org/research/butchering-the-planet-the-big-name-financiers-bankrolling-livestock-corporations-and-climate-change/>; Terazono, 'Climate Campaigners Turn Their Focus from Fossil Fuels to Meat', *Financial Times* (22 September 2022).

⁴⁵ Van Aaken, 'International Investment Law between Commitment and Flexibility: A Contract Theory Analysis', 12 *Journal of International Economic Law* (2009) 507; United Nations Conference on Trade and Development (UNCTAD), *The Role of International Investment Agreements in Attracting Foreign Direct Investment to Developing Countries* (2009), at 14.

is evidence that such agreements have indeed increased foreign investment in the agricultural sector.⁴⁶

Likewise, international trade law has been conducive to the expansion of industrial meat production – in particular, by allowing states the freedom to provide subsidies to meat production and by removing barriers to trade in meat products. Around 11 per cent of annual global meat production is traded across borders.⁴⁷ Trade has risen from €56 billion in 2000 to €152 billion in 2018⁴⁸ and is expected to continue growing,⁴⁹ largely due to an increase in consumption of animal proteins in Asian countries.⁵⁰ The 1994 Agreement on Agriculture,⁵¹ the 1994 General Agreement on Tariffs and Trade (GATT 1994)⁵² and free trade agreements (FTAs)⁵³ have been conducive to this development. The exact impact of that international law's facilitation of subsidies to meat production and international trade in, and production of, meat products is difficult to assess. What can be determined is that the global meat supply will continue to expand, and the international meat trade will expand in response to growing demand from countries in Asia and the Near East, where production will remain insufficient to meet demand.⁵⁴ In this context,

⁴⁶ Colen, Persyn and Guariso, 'Bilateral Investment Treaties and FDI: Does the Sector Matter?', 83 *World Development* (2016) 193, at 199; Kim and Steinbach, 'The Impact of Rising Protectionism on Foreign Direct Investment in Agriculture', available at <https://ageconsearch.umn.edu/record/304501>. This conforms to earlier studies that concluded that investment treaties play a role in increasing investments. Haftel, 'Ratification Counts: US Investment Treaties and FDI Flows into Developing Countries', 17 *Review of International Political Economy* (2010) 348; J. Bonnitcha, L. Poulsen and M. Waibel, *The Political Economy of the Investment Treaty Regime* (2017), at 166.

⁴⁷ Böll Stiftung, *supra* note 2, at 14.

⁴⁸ Guyomard *et al.*, 'Review: Why and How to Regulate Animal Production and Consumption: The Case of the European Union', 15 *Animal* (2021) 100283.

⁴⁹ OECD/FAO, *supra* note 3, at 175.

⁵⁰ Guyomard *et al.*, *supra* note 48. The highest volume of exports now includes the USA, New Zealand, Brazil, Australia, Canada, China, Thailand, India and Argentina; top importing countries are China, Japan, the USA, the European Union (EU) member states, South Korea, Mexico, Vietnam, Russia, Canada, Saudi Arabia and the United Arab Emirates. Böll Stiftung, *supra* note 2, at 14.

⁵¹ Agreement on Agriculture (AA) 1994, 1867 UNTS 410. On the limited impact of the AA on lowering of tariffs, see J.C. Bureau, H. Guimbard and S. Jean, *Agricultural Trade Liberalization in the 21st Century: Has It Done the Business?* (2017); Ghazalian, Larue and Gervais, 'Exporting to New Destinations and the Effects of Tariffs: The Case of Meat Commodities', 40 *Agricultural Economics* (2009) 701; Smith, 'Regulating Agriculture in the WTO', 7 *International Journal of Law in Context* (2011) 233, at 235–236.

⁵² General Agreement on Tariffs and Trade (GATT) 1994, 1867 UNTS 187, Arts XI, XIII.

⁵³ Free Trade Agreement between the European Union and the Socialist Republic of Viet Nam (EU-Vietnam FTA), OJ 2019 L 186, at 63, which provides for the progressive elimination of customs duties on agricultural products, including poultry products (which are subject to a tariff of 40 per cent), fresh pork and offal, hams (up to 25 per cent of tariff rate), frozen pork (15 per cent of tariff rate) and beef and lamb products (tariff rate up to 30 per cent). According to an official US website, 16 of the 20 free trade agreements (FTAs) signed by the USA provide for the immediate elimination of tariffs on 98 per cent of agricultural products. See 'Agricultural Information on Free Trade Agreements (FTAs)', *Office of the United States Trade Representative*, available at <https://ustr.gov/issue-areas/agriculture/agricultural-information-free-trade-agreements-ftas>.

⁵⁴ OECD/FAO, *supra* note 3.

the causal connection between permitting subsidies and reducing tariffs and an increase in trade is a plausible one.⁵⁵

In this international legal context consisting, above all, of liberties, multinational corporations play a key role in the global process of meat production. They do not only operate from North to South but, increasingly, the other way, reflecting shifts in economic growth, consumer demand and corporate practices. The Chinese corporation Shuanghui International Holdings purchased US-based Smithfield Foods, the world's biggest pork producer.⁵⁶ JBS SA, based in Brazil and the world's biggest producer of beef, acquired meat producers in the United States, Australia and Europe.⁵⁷ Concerns over animal welfare have not restrained this global drive towards increasing the production of meat and have played at best a marginal role in the relevant instruments. An apt illustration is that the Principles for Responsible Investment in Agriculture and Food Systems, adopted in 2014 by the Committee on World Food Security, articulate all sorts of interests relevant to investment in agriculture and food systems but, in relation to animal welfare, limit themselves to a call on the relevant actors to support 'animal health and welfare ... to sustainably increase productivity, product quality, and safety'.⁵⁸ This instrumental view on animal welfare is a symbolic expression of the subordinate role of animal welfare in the global regime for meat production.

In combination, international institutions and instruments have provided strong support for global industrial meat production. Any attempt to advance animal welfare in this regime complex will need to dismantle part of this supportive regime and must address the fundamental question of how the protection of animal welfare will have an impact on, and is to be weighed against, the interests of food security and the connected economic interests.

3 The Emergence of International Animal Welfare Standards

Notwithstanding the push to expand meat industrial production, already in the early part of the previous century, states developed international standards relevant to farm animals. However, these were not driven by concerns over animal welfare but, rather, by concerns over transboundary effects of animal diseases, to which states responded by imposing trade restrictions.⁵⁹ In 1924, 28 states established the Office International des Epizooties (OIE), which has since been renamed WOAH, to

⁵⁵ Beckman and Scott, 'How the Removal of Tariffs Would Impact Agricultural Trade', *USDA* (2021), available at www.ers.usda.gov/amber-waves/2021/june/how-the-removal-of-tariffs-would-impact-agricultural-trade/.

⁵⁶ 'The Chinese Takeover of Smithfield Foods', *CMHI*, available at www.cmhi.com.hk/the-chinese-takeover-of-smithfield-foods/.

⁵⁷ 'History', *JBS*, available at <https://ri.jbs.com.br/en/jbs/history/>.

⁵⁸ Committee on World Food Security, Committee on World Food Security Principles for Responsible Investment in Agriculture and Food Systems (2014), para. 128.

⁵⁹ Kahn, 'Animal Welfare in the Context of World Trade Organization Dispute Settlement', 39 *RST* (2020) 69.

regulate the adverse (trade) impacts of transboundary animal diseases.⁶⁰ In 1928, it was agreed that traded meat products had to be accompanied by sanitary documents provided by properly organized veterinary services; only such documents could sufficiently guarantee food safety.⁶¹ It took some 80 years before concerns over animal welfare led WOAAH to broaden its activities beyond animal health.⁶² To assess what has been done and what can be expected from WOAAH, the following sections discuss the legal basis for WOAAH to widen its activities to animal welfare, the standards that it has set and its activities to support regional implementation of these standards.

A WOAAH's Legal Powers in Relation to Animal Welfare

The 28 states that set up WOAAH in 1924 did not have animal welfare on their mind. The Organic Statutes, which are an integral part of the 1924 agreement, stipulate that WOAAH's objectives relate to contagious diseases of livestock: it was to promote and coordinate research concerning contagious diseases of livestock; to inform governments of the spread of epizootic diseases and the means to control them; to examine international draft agreements regarding animal sanitary measures; and to provide governments with the means of supervising their enforcement.⁶³ Eighty years later, WOAAH nonetheless included animal welfare in its 2001–2005 Strategic Plan, which envisaged that WOAAH must provide international leadership.⁶⁴ In 2002, it adopted an animal welfare mandate, instructing it to develop standards and guidelines leading to good animal welfare practices in matters such as housing, management, transportation and killing, with a priority for animals used in agriculture.⁶⁵ And from 2005 onwards, WOAAH has incorporated these standards in the TAHC, which previously only addressed animal health.⁶⁶

One may say that the gradual expansion of its activities to include animal welfare by WOAAH is an example of 'mission-creep',⁶⁷ and the question is whether there are any limits to its powers to address animal welfare. For instance, can WOAAH adopt legally binding obligations pertaining to animal welfare rather than just recommendatory standards, or can it adopt standards that would address the supply of, and demand for, meat so as to reduce the scope of industrial farming? When the contracting parties to the 1924 agreement decided to embark on the path of animal welfare, they

⁶⁰ International Agreement for the Creation of an Office International Des Epizooties in Paris, with Appendix: Organic Statutes of the Office International Des Epizooties (Organic Statutes) 1924, 57 LINTS 135, Art. 4.

⁶¹ 'History', WOAAH, available at www.woah.org/en/who-we-are/mission/history/.

⁶² For an overview of this development, see Petrini and Wilson, 'Philosophy, Policy and Procedures of the World Organisation for Animal Health for the Development of Standards in Animal Welfare', 24 RST (2005) 665.

⁶³ Organic Statutes, *supra* note 60, Art. 4.

⁶⁴ Petrini and Wilson, *supra* note 62, at 666.

⁶⁵ OIE, Resolution XIV on the Animal Welfare Mandate of the OIE, 70th General Session, OIE Doc. 70GS/FR, 26–31 May 2002, at 31–33; Peters, *supra* note 22, at 86–89.

⁶⁶ See section 3.B.

⁶⁷ See generally Peters, 'Constitutional Theories of International Organisations: Beyond the West', 20 *Chinese Journal of International Law* (2021) 649, at 659.

did not consider it necessary to amend the agreement and to make animal welfare an explicit objective of the agreement.⁶⁸ They apparently shared the understanding that the terms of the Organic Statutes, which were textually limited to contagious diseases of livestock and animal sanitary measures, could be interpreted dynamically and allowed them to adopt the animal welfare mandate and to set international standards. This is of course not uncommon for international organizations: '[T]he interpretation of constitutive instruments is a workaday task of international organizations that must interpret their constitutive instruments in light of an endless stream of novel legal issues.'⁶⁹

Reading animal welfare into the objectives of WOAAH can in part rest on the close relationship between animal health and animal welfare. WOAAH's definition of animal welfare incorporates health.⁷⁰ Moreover, the concerns over trade measures relating to animal health that induced the 1924 agreement apply equally to national animal welfare standards that can adversely impact on international trade. It indeed has been reported that WOAAH's animal welfare initiative was induced by the consideration that animal health and animal welfare were inextricably linked and by the need for guidance to assist states in international trade and in bilateral negotiations.⁷¹ For another part, a dynamic interpretation can be grounded on WOAAH's practice in relation to animal welfare and the support that its member states have given to this practice.⁷² The adoption of the animal welfare mandate, the inclusion of animal welfare standards in the TAHC and the subsequent practices to implement these standards at the regional level all signal that the parties have accepted animal welfare as part of the powers of the organization. This support is legally relevant. The International Court of Justice (ICJ) observed that, for the interpretation of constituent treaties, not only is the text important but also 'the very nature of the organization created, the objectives which have been assigned to it by its founders, the imperatives associated with the effective performance of its functions, as well as its own practice, are all elements which may

⁶⁸ Art. 5 provides that '[t]he High Contracting Parties reserve the right to make, by common consent, any changes in the present Agreement which, in the light of experience, are deemed desirable'.

⁶⁹ Arsanjani, 'Are There Limits to the Dynamic Interpretation of the Constitution and Statutes of International Organizations by the Internal Organs of Such Organizations (with particular Reference to the UN System)?', *Institut de Droit International* (2021), at 26, available at www.idi-iil.org/en/publications-par-categorie/rapports/.

⁷⁰ TAHC, *supra* note 22, Art. 7.1.1 (providing that an animal experiences good welfare if it is 'healthy, comfortable, well nourished, safe, is not suffering from unpleasant states such as pain, fear and distress, and is able to express behaviors that are important for its physical and mental state'; good animal welfare requires 'disease prevention and appropriate veterinary care, shelter, management and nutrition, a stimulating and safe environment, humane handling and humane slaughter or killing'). See also Fraser, 'Understanding Animal Welfare', 50 *Acta Veterinaria Scandinavica* (2008) 1; Hewson, 'What Is Animal Welfare? Common Definitions and Their Practical Consequences', 44 *Canadian Veterinary Journal* (2003) 496, at 496 (defining animal welfare as comprising 'the state of the animal's body and mind, and the extent to which its nature (genetic traits manifest in breed and temperament) is satisfied').

⁷¹ Petrini and Wilson, *supra* note 62, at 666.

⁷² Arsanjani, *supra* note 69, at 234.

deserve special attention when the time comes to interpret these constituent treaties'.⁷³ Also taking into account the absence of any oversight mechanisms, any expansion of WOAH activities in the direction of animal welfare will largely be in the hands of the parties; one can say that the process of interpretation is a 'circular process, in which there can be *a priori* no limitation to the evolution of the interpretation performed by the organizations'.⁷⁴

On these grounds, the animal welfare mandate of WOAH, and the activities of WOAH in this field, do not seem to exceed the limits of WOAH's powers. This does not mean that anything goes. It is, for instance, very doubtful whether WOAH could adopt standards aimed at reducing the supply or demand of meat, with a view to reducing the scale of intensive meat production. The ICJ's conclusion in the advisory opinion in *Use of Nuclear Weapons* that the WHO could deal with the effects of nuclear weapons 'such as "taking preventive measures" to mitigate those effects but could not address the "legality of the acts that caused" such effects' is relevant here.⁷⁵ Also, while many animal welfare aspects can be linked to animal health, which may not be the case for all animal welfare concerns, the original animal health mandate of WOAH will restrain the range of animal welfare concerns that WOAH can address.

B WOAH's International Standards: The TAHC

On the basis of a wide reading of its powers, and supported by the states parties, WOAH incorporated animal welfare standards in the TAHC in 2005.⁷⁶ This document now is the single most authoritative global instrument for the protection of farm animals, signalling for the first time that animal welfare 'had become an issue for official attention at a global level'.⁷⁷ The adoption of these standards by (now) 182 member states was a remarkable achievement, given the worldwide differences in socio-economic situations, cultural values and consumer preferences. The TAHC sets standards for the production systems of beef cattle,⁷⁸ chickens⁷⁹ and pigs,⁸⁰ relating to animal health management, temperature, lighting, air quality, nutrition, stocking density, resting areas, castration, tail docking, transport (for instance, addressing the time animals should spend on a journey, the competency of animal handlers, the availability of water and feed and inspection)⁸¹ and slaughter (for example, stunning practices).⁸²

⁷³ *Legality of the Use by a State of Nuclear Weapons in Armed Conflict*, Advisory Opinion, 8 July 1996 ICJ Reports (1996) 66, at 75. On the role of 'established practice' in the interpretation of constituent treaties, see also Arsanjani, *supra* note 69, at 235.

⁷⁴ Arsanjani, *supra* note 69, at 118.

⁷⁵ *Nuclear Weapons in Armed Conflict*, *supra* note 73, at 76.

⁷⁶ TAHC, *supra* note 22.

⁷⁷ Fraser, *supra* note 70, at 331.

⁷⁸ TAHC, *supra* note 22.

⁷⁹ *Ibid.*, ch. 7.10.

⁸⁰ *Ibid.*, ch. 7.13.

⁸¹ *Ibid.*, ch. 7.3.

⁸² *Ibid.*, Art. 7.5.10.

Despite this significant step forward for global animal welfare protection, the TAHC is limited in fundamental respects. First, the standards are not legally binding.⁸³ Although the Organic Statutes stipulate that the office can 'examine international draft agreements regarding animal sanitary measures',⁸⁴ states have opted to include animal welfare standards in the non-binding TAHC rather than in a binding agreement. Second, the animal welfare standards in the TACH are formulated in general terms and, for the most part, lack concrete indicators.⁸⁵ This holds first and foremost for the concept of animal welfare. The TAHC defines animal welfare in general terms,⁸⁶ and few would be against animal welfare in these terms. But the question is whether actors have shared interpretations on what this requires in concrete cases. The fact that all members of WOAAH, many of which permit large-scale industrial meat production, had no difficulty in accepting the definition indicates that the concept is flexible and allows different actors to interpret the demands of animal welfare in different ways. In addition, the more specific standards in the TAHC provide little guidance to producers, veterinarians and other relevant actors. It often will not be easy to determine whether a particular standard is being complied with.⁸⁷ Third, the TAHC has a narrow scope: it only addresses the internal aspects of production systems and does not address the supply side (for example, subsidies to intensive meat production or, rather, to alternative sources of protein) or the demand side (for example, information to consumers that may lead them to different consumption practices). It is debatable if WOAAH would have the power to adopt such measures, but this question is moot as neither the office nor the parties seem inclined to put them on the agenda.

A further limitation is that WOAAH has limited powers to oversee the implementation of the TAHC, let alone to compel compliance. While it has been reported that most states have incorporated TAHC standards in national law,⁸⁸ information on actual compliance with the TAHC is sparse.⁸⁹ In 2018, WOAAH set up the WOAAH Observatory to systematically observe and analyse members' implementation of the TAHC.⁹⁰ The first results, published in 2022, demonstrate significant gaps in information on national regulations that implement the TAHC and, to the that extent such information

⁸³ The only legal obligation stemming from the Organic Statutes of the OIE is that member states must notify disease status and disease control measures to the OIE. Organic Statutes, *supra* note 64, Art. 5.

⁸⁴ *Ibid.*, Art. 4(c).

⁸⁵ Bonnet *et al.*, *supra* note 6.

⁸⁶ TAHC, *supra* note 22; see also Fraser, *supra* note 70; Hewson, *supra* note 70.

⁸⁷ Peters, *supra* note 22, at 89–90.

⁸⁸ S. Brels, *Le droit du bien être animal dans le monde: évolution et universalisation* (2017), at 408 (stating that 180 states have incorporated the OIE's welfare standards in their domestic laws). A 2008 questionnaire showed great differences in implementation. Stafford and Mellor, 'The Implementation of Animal Welfare Standards by Member Countries of the World Organisation for Animal Health (OIE): Analysis of an OIE Questionnaire', 28 *RST* (2009) 1143.

⁸⁹ Organisation for Economic Co-operation and Development (OECD), OECD Study on the World Organisation for Animal Health (OIE) Observatory: Strengthening the Implementation of International Standards (2020).

⁹⁰ 'OIE Observatory', WOAAH, available at www.woah.org/en/what-we-do/standards/observatory/. For a discussion on the monitoring task of the OIE, see Bucher *et al.*, 'Implementation of OIE International Standards: Challenges and Opportunities for Monitoring', 39 *RST* (2020) 57.

is available, signal a strong discrepancy between Europe and other regions.⁹¹ WOAAH has few powers to compel states to improve compliance.

C Regional Standards

While, in all regions, regional initiatives for animal welfare have supplemented the TAHC, only in Europe have the standards been set to go beyond the TAHC in terms of legal nature, contents and scope. Member states of the Council of Europe have adopted treaties for the protection of farm animals, notably for transport and slaughter.⁹² The European Union (EU) has taken these obligations a step further in its farming directive of 1998⁹³ and in subsequent instruments addressing transport⁹⁴ and slaughter⁹⁵ and specific groups of animals, including calves,⁹⁶ chickens⁹⁷ and pigs.⁹⁸ European standards may potentially extend beyond the inside world of meat production. Driven by both animal welfare concerns (even the relatively elaborate European standards have not been able to end widespread animal suffering in industrial livestock farming)⁹⁹ and the effects of intensive meat production on health and climate, the European Commission's Farm to Fork Strategy seeks to strengthen animal welfare legislation and to reduce the consumption and production of meat.¹⁰⁰ None of this is on the agenda of WOAAH, and this strategy is the single example where regional developments significantly go beyond the global agenda.

⁹¹ WOAAH, Implementation of WOAAH Standards: The Observatory Annual Report (2022).

⁹² European Convention for the Protection of Animals Kept for Farming Purposes 1976, ETS no. 87; European Convention for the Protection of Animals during International Transport (revised) 2003, ETS no. 193; European Convention for the Protection of Animals for Slaughter 1979, ETS no. 102.

⁹³ Council Directive (EC) 98/58 Concerning the Protection of Animals Kept for Farming Purposes, OJ 1998 L 221, at 23.

⁹⁴ Council Regulation (EC) 1/2005 on the Protection of Animals during Transport and Related Operations and Amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) no 1255/97, OJ 2004 L 3, at 1.

⁹⁵ Council Regulation (EC) 1099/2009 on the Protection of Animals at the Time of Killing, OJ 2009 L 303, at 1.

⁹⁶ Council Directive (EC) 2008/119 Laying down Minimum Standards for the Protection of Calves, OJ 2008 L 10, at 7, 119.

⁹⁷ Council Directive (EC) 2007/43 Laying down Minimum Rules for the Protection of Chickens Kept for Meat Production, OJ 2007 L 182, at 19, 43.

⁹⁸ Council Directive (EC) 2008/120 Laying down Minimum Standards for the Protection of Pigs, OJ 2009 L 47, at 5, 120.

⁹⁹ For instance, in relation to confinement systems, see European Commission, Report from the Commission to the European Parliament and the Council on the Implementation of Council Directive 98/58/EC Concerning the Protection of Animals Kept for Farming Purposes, Doc. COM/2016/0558 final (2016); for tail docking of pigs, see 'Answer Given by Ms Kyriakides on Behalf of the European Commission on the Implementation of the Ban on Routine Tail-Docking', Question Reference: E-002862/2020, 12 August 2020; and for transport, see European Parliament, Report on the Implementation of Council Regulation No 1/2005 on the Protection of Animals during Transport within and Outside the EU, Doc. 2018/2110(INI) (2019).

¹⁰⁰ European Commission, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A Farm to Fork Strategy for a Fair, Healthy and Environmentally Friendly Food System, Doc. COM/2020/381 final (2020).

In other regions, the focus has not been on new standards but, rather, on the implementation of the TAHC. WOAAH has played a significant role here by providing normative guidance and by supporting implementation by states, meat-producing corporations and veterinarians. In Africa, where animal welfare standards for meat production are relatively undeveloped and poorly implemented,¹⁰¹ WOAAH has, in cooperation with the African Union (AU) and the AU's Inter-African Bureau for Animal Resources, adopted the 2017 Animal Welfare Strategy for Africa¹⁰² and the African Platform for Animal Welfare. These initiatives seek to support implementation of the TAHC by awareness raising and training of farming practices.¹⁰³ In the Americas, WOAAH has set up of a Regional Strategy for Animal Welfare for the Americas in 2012,¹⁰⁴ which is to coordinate the regional implementation of the TAHC.¹⁰⁵ And, for Asia, where support for demanding animal welfare standards has been limited,¹⁰⁶ WOAAH has helped to develop the 2008 wider Regional Animal Welfare Strategy for Asia, the Far East and Oceania.¹⁰⁷

The transposition of the WOAAH standards to regional institutions is a good example of how WOAAH works with other institutions to accomplish what it cannot do alone. WOAAH provides normative guidance and expertise to regional institutions; in return, such institutions provide WOAAH with governance capabilities that it itself lacks, support implementation and can help to cement the role of the TAHC in practice. The impact of these developments on actual animal welfare production is uncertain; no studies have been found that provide insight on whether they have led to improved protection in industrial meat production in states such as Argentina, Brazil, China and South Africa.¹⁰⁸

With the exception of the EU, all of this remains below the radar of international law. WOAAH and the regional networks are populated by experts that shape regional and animal welfare practices and give concrete meaning to animal welfare standards in particular contexts. None of this has resulted in any obligation for states or meat-producing corporations to change their practices in industrial meat production. The difference between the legally binding and relatively demanding European standards, and the absence of such standards in other regions, provides little faith in what we can expect at the global level. It may be tempting to see European standards, and the

¹⁰¹ Qekwana *et al.*, 'Animal Welfare in Africa: Strength of Cultural Traditions, Challenges and Perspectives', in S. Hild and L. Schweitzer (eds), *Animal Welfare: From Science to Law* (2019) 103.

¹⁰² Animal Welfare Strategy in Africa 2017, available at https://rr-africa.woah.org/wp-content/uploads/2019/05/awsa_executive_summary_layout_eng_2017.pdf

¹⁰³ *Ibid.*, iii, 9; Agreement between the World Organisation for Animal Welfare (OIE) and the Organization of African Unity – Interafrican Bureau for Animal Resources 2015, available at https://rr-africa.woah.org/wp-content/uploads/2000/11/au_ibar_agreement.pdf, Art. 4(e).

¹⁰⁴ OIE Regional Commission of the Americas, Regional Animal Welfare Strategy for the Americas (2012).

¹⁰⁵ Glass, Kahn and Arroyo Kuribreha, 'Awareness and Implementation of the Regional Animal Welfare Strategy for the Americas: A Questionnaire', 34 *RST* (2015) 673, at 674.

¹⁰⁶ Nizamuddin and Rahman, *supra* note 10.

¹⁰⁷ Murray, Ashley and Kolesar, 'Drivers for Animal Welfare Policies in Asia, the Far East and Oceania', 33 *RST* (2014) 77, at 78; Nizamuddin and Rahman, *supra* note 10.

¹⁰⁸ The 2022 WOAAH Observatory report indicates that compared to Europe, little information on implementation of the TAHC is available in other regions. See WOAAH, *supra* note 91.

attempt of the EU to promote these standards worldwide via FTAs, as a progressive agenda to advance the cause of farm animals. But that would gloss over the huge differences in food security, socio-economic circumstances and the weight that is attributed in different areas to animal welfare. These differences will impact on any attempt to develop international law at the global level.¹⁰⁹

D Outlook

Developing international law that protects farm animals from the impacts of industrial farming is an uphill battle, given the overriding interest that states attach to food security and the economic interests associated with meat production and given regional differences. In this context, WOAAH has made a remarkable contribution by setting standards, supporting implementation and providing a normative and institutional framework that can be invoked and used by actors pushing for further development of the global animal welfare agenda.

But WOAAH alone is not well positioned to realize structural differences. This is illustrated by the fact that WOAAH's budget is just over US \$42.5 million,¹¹⁰ compared to, for instance, US \$195 million for the WTO,¹¹¹ US \$872 million for UNEP,¹¹² US \$3.25 billion for the Food and Agriculture Organization (FAO)¹¹³ and US \$6.72 billion for the WHO.¹¹⁴ These differences will reflect the differences in political weight attached to animal welfare as compared to other public policy issues. WOAAH's mandate, which formally remains anchored in animal health, also limits the scope of the animal welfare measures it can adopt and makes it unlikely that WOAAH can push an agenda aimed at structural changes in supply and demand. It is against this background that we must enquire into the practices of other international institutions that serve wider, human-centred needs, with which WOAAH can form alliances, and that may have positive effects on the development of a global regime that contributes to animal welfare.

4 Animal Welfare and the Global Economy

Given their contribution to the globalization of industrial meat production, international economic institutions and instruments are unlikely candidates for serving the cause of animal welfare. Nonetheless, in the past decade, these institutions have

¹⁰⁹ Peters, 'Global Animal Law: What It Is and Why We Need It', 5 *Transnational Environmental Law* (TEL) (2016) 9, at 22.

¹¹⁰ WOAAH, OIE 88th General Session Financial Summary Report (2020), at 3, available at https://web.oie.int/download/SG/2021/A_88SG_OIE_Financial_Summary.pdf.

¹¹¹ World Trade Organization (WTO), WTO Annual Report 2022, at 208, available at www.wto.org/english/res_e/booksp_e/anrep_e/ar22_e.pdf.

¹¹² United Nations Environment Programme (UNEP), Programme of Work and Budget for 2022–2023, Doc. UNEP/EA.5/3/Add.1, 7 December 2022, section 48, at 37.

¹¹³ Food and Agriculture Organization (FAO), Adjustments to the Programme of Work and Budget 2022–23, Doc. CL 168/3, October 2021, at 15.

¹¹⁴ World Health Organization (WHO), Budget, available at <https://www.who.int/about/accountability/budget/>.

started to support the development and application of international standards for the protection of animal welfare in global meat production. One part of this contribution has been the reaffirmation of the rights of states to set and apply national animal welfare standards, counteracting the push to outlaw unilateral measures when these have had adverse effects on trade and investment. Key steps in this process were the rulings of the WTO Appellate Body in *EC – Seal Products*, which upheld the argument that states may justify national measures to protect animal welfare under the public morals exception of Article XX(a) of the GATT 1994,¹¹⁵ and in *US – Tuna II*, which provides authority for the proposition that animal welfare qualifies as a legitimate objective under the TBT Agreement.¹¹⁶ Also several investment treaties¹¹⁷ and FTAs¹¹⁸ recognize the right of states to maintain and enforce animal welfare laws.

For another part, economic institutions have supported international animal welfare standards. Whether this development has been based on an increasing weight attached to animal welfare or on the consideration that international standards can help prevent adverse effects of unilateral standards on trade and investment is difficult to determine. But, either way, the result has been support for adherence to international standards that complements and strengthens the TAHC. We can observe this process in the WTO, FTAs, lending and investment and corporate policies.

A International Animal Welfare Standards in the WTO

The support that the WTO provides for adherence to the animal welfare standards of the TAHC supplements its more established practice of supporting the animal health parts of the TAHC based on the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement).¹¹⁹ This agreement rules out certain

¹¹⁵ *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products – Report of the Appellate Body (EC – Seal Products, AB)*, 22 May 2014, WT/DS400/AB/R, WT/DS401/AB/R. The public morals exception has not been used in relation to animal welfare after the seals case, but, potentially, the exception may for instance justify labelling requirements that demand animal welfare information from domestic and foreign producers. For a discussion on such measures, see Blattner, *supra* note 29, at 131–159.

¹¹⁶ *Agreement on Technical Barriers to Trade (TBT Agreement) 1994*, 1868 UNTS 120, Art. 2.2; *Measures Concerning the Importation, Marketing and Sale of Tuna and Tuna Products – Report of the Appellate Body (US – Tuna II, AB)*, 13 June 2012, WT/DS381/AB/R, paras 303–314. This is supported by the fact that animal welfare is now covered by the public morals exception of Art. XX(a) of the GATT 1994, *supra* note 52; Blattner, *supra* note 29, at 137.

¹¹⁷ In US bilateral investment treaties, animal welfare can be construed as an exception to the performance of the parties' obligations under the investment agreement. See, e.g., *Treaty between the United States of America and the Oriental Republic of Uruguay Concerning the Encouragement and Reciprocal Protection of Investment*, Treaty Doc. 109-9 (2004), Art. 8.3(c). The UNCTAD Investment Policy Hub lists over 20 agreements containing provisions relating to animal welfare. On the relevance of such provisions critically, see Blattner, *supra* note 29, at 207.

¹¹⁸ For an overview of FTAs, including animal welfare-related provisions, see Peters, *supra* note 22, at 317–325.

¹¹⁹ *Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) 1994*, 1867 UNTS 493.

national regulations dealing with animal health¹²⁰ but allows them when they are necessary, non-discriminatory and based on international standards;¹²¹ national measures are deemed to be compatible with the SPS Agreement if they are based on the TAHC.¹²² The SPS Agreement thus incentivizes application of the international health standards in the TAHC,¹²³ even though this does not mean that national standards have to conform to the TAHC.¹²⁴ This normative connection is supplemented by an institutional connection between WOAAH and the WTO; WOAAH participates in the SPS Committee, helping it to determine whether national sanitary and phytosanitary measures conform to the TAHC and thus are compatible with the SPS Agreement.¹²⁵

It is a compelling argument that a dynamic interpretation of the WTO agreements similarly incentivizes application of the animal welfare chapters of the TAHC. A wide category of national measures that seek to protect animal welfare – for example, labelling requirements – will be subject to the TBT Agreement.¹²⁶ The TBT Agreement rules out such standards, unless they pursue legitimate objectives¹²⁷ and are based on international standards.¹²⁸ Although the TBT Agreement does not mention animal welfare and, in contrast to the SPS Agreement, does not refer to the TAHC,¹²⁹ this difference is more apparent than real. In view of the ruling of the Appellate Body in *US – Tuna II* that an objective that does not appear among those listed in Article 2.2 of the TBT Agreement may qualify as a legitimate objective if it is ‘lawful, justifiable or proper’,¹³⁰ animal welfare should qualify as a legitimate objective within the meaning of the TBT Agreement – all the more since it is covered by the public morals exception of Article XX(a) of the GATT 1994.¹³¹ And while the TBT Agreement does not expressly create

¹²⁰ For the economic effects of SPS measures, see Xi Shang and Tonsor, ‘Sanitary and Phytosanitary Regulations and International Red Meat Trade’, 121 *British Food Journal* (2019) 2309.

¹²¹ SPS Agreement, *supra* note 119, Art. 2.1.

¹²² *Ibid.*, Art. 3; see also Blattner, *supra* note 29, at 142.

¹²³ OECD, *supra* note 89. Between January 2005 and December 2021, there were 2,594 notifications filed with the WTO that explicitly reported being related to existing WOAAH standards. See WOAAH, *supra* note 91, at 44.

¹²⁴ *European Communities – EC Measures Concerning Meat and Meat Products (Hormones) – Report of the Appellate Body*, 16 January 1998, WT/DS26/AB/R, para. 165.

¹²⁵ Agreement between the World Trade Organization (WTO) and the Office International Des Epizooties (OIE) 1998, available at <https://www.woah.org/en/who-we-are/structure/framework/cooperation-agreements/agreement-with-the-world-trade-organization-wto/>, Art. 3; see also Blattner, *supra* note 29, at 142. Note that the boundaries between animal health and animal welfare are not sharp; compliance with WOAAH standards in conjunction with the SPS regime may result in improvement of animal health and welfare.

¹²⁶ TBT Agreement, *supra* note 116, Art. 2.2.

¹²⁷ *Ibid.*

¹²⁸ *Ibid.*, Art. 2.4.

¹²⁹ *Ibid.*; see also *European Communities – Measures Prohibiting the Importation and Marketing of Seal Products – Report of the Panel*, 14 June 2014, WT/DS400/R and WT/DS401/R, para. 5.140 (in which the panel concluded that animal welfare is a ‘legitimate objective’ within the meaning of Art. 2.2 of the TBT Agreement. However, the Appellate Body reversed the Panel’s finding that the EU Seal Regime constituted a technical regulation subject to the disciplines of the TBT Agreement and the Panel’s conclusion on animal welfare has no legal effect. *EC – Seal Products*, AB, *supra* note 115, par. 5.70.

¹³⁰ *US – Tuna II*, AB, *supra* note 116, paras 303–314.

¹³¹ Supporting this conclusion, see Blattner, *supra* note 29, at 137.

a presumption that national standards that comply with the TAHC do not create an unnecessary obstacle to international trade,¹³² it does refer to international standards that are adopted by a recognized standardizing body.¹³³ WOAHA surely qualifies as such a body,¹³⁴ and WTO members thus can justify national standards that relate to meat products if they conform to the TAHC. In this way, the TBT regime, like the SPS Agreement, incentivizes performance of the TAHC.¹³⁵

This substantive connection between the TBT regime and the animal welfare provisions of the TAHC may be the basis of cooperation between WOAHA and the WTO in the TBT Committee, comparable to the role of WOAHA in the SPS Committee.¹³⁶ This would make WOAHA expertise relevant to the assessment of national animal welfare regulations and help to implement the TAHC. Expanding the TBT Agreement in this direction would not cause any legal problems for the WTO, which was tasked to 'facilitate the implementation, administration and operation' of the WTO agreements.¹³⁷ This surely captures cooperation with WOAHA with a view to the implementation of the TAHC in the context of the TBT Agreement.

B International Animal Welfare Standards in FTAs

To a limited extent, some FTAs also have supported the development of international animal welfare standards.¹³⁸ Several recent FTAs that include provisions on animal welfare¹³⁹ not only require parties to apply and enforce domestic animal welfare laws but also call for the development and application of international standards. The EU is the frontrunner in this development and has included commitments to develop and apply international animal welfare in its FTAs, for example with South Korea¹⁴⁰ and Vietnam.¹⁴¹ The FTAs that the United Kingdom (UK) concluded with

¹³² TBT Agreement, *supra* note 116, Art. 2.5.

¹³³ *Ibid.*, Annex 1.4.

¹³⁴ Blattner, *supra* note 29, at 138; Zúñiga Schroder, 'Definition of the Concept "International Standard" in the TBT Agreement', 43 *Journal of World Trade* (2009) 1223, at 1227.

¹³⁵ While the TBT Agreement does not expressly refer to WOAHA standards, there now has to be a presumption that national standards that comply with the TAHC do not create an unnecessary obstacle to international trade. Blattner, *supra* note 29, 138; Zúñiga Schroder, *supra* note 134, at 1227.

¹³⁶ OECD, *supra* note 89.

¹³⁷ Agreement Establishing the World Trade Agreement 1994, 1867 UNTS 154, Art. 3.

¹³⁸ Bollard, 'Global Approaches to Regulating Farm Animal Welfare', in Steier and Patel, *supra* note 27, at 105 (discussing the role of FTAs in the improvement of animal welfare standards).

¹³⁹ For an overview of FTAs including animal welfare-related provisions, see Peters, *supra* note 22, at 317–325.

¹⁴⁰ Free Trade Agreement between the European Union and Its Member States, of the One Part, and the Republic of Korea, of the Other Part 2010, OJ 2010 L 127, at 68.

¹⁴¹ EU-Vietnam FTA, *supra* note 53, at 63; see also chapter on 'Cooperation on Animal Welfare and Anti-Microbial Resistance' of the Agreement in Principle of the EU-Mexico Global Agreement 2018, available at https://www.eeas.europa.eu/node/54593_en, which includes a provision that recognizes animals as 'sentient beings' and the 'value of the OIE animal welfare standards'. The text states that '(the parties) shall endeavour to improve their implementation while respecting their right to determine the level of their science-based measures on the basis of OIE animal welfare standards'. See also Peters, *supra* note 22, at 323.

Australia¹⁴² and New Zealand¹⁴³ similarly include a commitment to cooperate to develop international standards. The latter FTA provides for cooperation ‘to reinforce and broaden the scope of the World Animal Health Organisation (OIE) animal welfare standards with a focus on farmed animals’.¹⁴⁴

These agreements may be seen as instruments by which the EU and the UK advance their conceptions of animal welfare to other regions, but it can be noted that similar provisions can be found in other regions. An example is the adoption by the Association of Southeast Asian Nations of the Good Animal Husbandry Practices programmes for layers, broilers and ducks¹⁴⁵ as well as for pigs,¹⁴⁶ which incorporate WOA standards. This support for international animal welfare standards caters both to the increasing demand for animal welfare protection and to the aim to provide a level playing field for national trade measures. Either way, to some extent, it counters the push of FTAs to lower tariffs on meat products and thereby contribute to the expansion of meat production at the cost of animal welfare. The agreements provide support to, and defer to, a further process in which the substance of international animal welfare standards has to be reconciled with competition. In particular, they also strengthen the legal weight of the TAHC and the position of WOA as the leading international institution that can drive the global animal welfare agenda.

C International Animal Welfare Standards in Lending and Investment Law

The regime for lending and investment relating to meat production that, like trade law, has been a driver of the global process of meat production has been slow to make a transition to supporting animal welfare standards, illustrated by the aforementioned absence of animal welfare in the 2014 Principles for Responsible Investment in Agriculture and Food Systems.¹⁴⁷ Nonetheless, this regime also has moved from a one-dimensional focus on enhancing intensive meat production to a regime that is more supportive of animal welfare-friendly production systems. One example is the 2014 IFC Good Practice Note on Animal Welfare.¹⁴⁸ This note, developed in cooperation with WOA, is meant to ensure that IFC lending practices are compatible with the TAHC. Whether this initiative was driven by genuine concern over animal welfare is unclear; rather, it may seek to mitigate financial risks as poor animal welfare standards may

¹⁴² Free Trade Agreement between the United Kingdom of Great Britain and Northern Ireland and Australia 2021, Art. 25.6(b) (not yet in force) (which stipulates that ‘the parties agree to working together in relevant international fora on areas of mutual interest, including to promote the development of the best possible animal welfare standards and practices for animals farmed for food production’).

¹⁴³ Free Trade Agreement between the United Kingdom of Great Britain and Northern Ireland and New Zealand 2022, Art. 6.3(5) (not yet in force).

¹⁴⁴ *Ibid.*

¹⁴⁵ Association of South-East Asian Nations (ASEAN), Good Animal Husbandry Practices (GAHP), Animal Welfare and Environmental Sustainability Module for Layers, Broilers and Ducks (2016).

¹⁴⁶ ASEAN, GAHP, Animal Welfare and Environmental Sustainability Module for Pigs (2012).

¹⁴⁷ See section 2.

¹⁴⁸ IFC, Good Practice Note: Improving Animal Welfare in Livestock Operations (2014), at 23.

negatively impact on consumer preferences and, thus, on investments.¹⁴⁹ Either way, the result may be a further impulse for the performance of animal welfare standards in the TAHC.

The same holds true for the animal welfare standards used by the EBRD. The EBRD invests in livestock operations in Europe, Central Asia and North Africa. Its 2019 Environmental and Social Policy requires that clients involved in the farming, transport and slaughtering of animals for meat adopt and implement relevant EU animal welfare standards and 'good international practices', presumably aligning with the TAHC standards.¹⁵⁰ These examples demonstrate how alliances between WOAHS standards and institutions in the field of lending and investment can support the animal welfare agenda. From the perspective of the IFC and the ERBD, the alliance with WOAHS brings normative guidance that supports their agendas; from the perspective of WOAHS, these institutions bring new capabilities as WOAHS itself was unlikely to guide investments. While the impact of these standards is uncertain, they are part of the process of a growing recognition of, and support for, international animal welfare standards in the wider regime complex for global meat production.

D *International Animal Welfare Standards in Corporate Codes of Conduct*

While the multinational corporations that play a key role in the global process of meat production¹⁵¹ have not been supportive of binding, detailed regulations,¹⁵² some corporations have embraced standards that are aligned with the WOAHS standards¹⁵³ and, thereby, contribute to the development and application of international animal welfare standards.¹⁵⁴ For instance, Cargill claims that it is 'committed to continuous improvement in animal welfare efforts, with our philosophy based on meeting or exceeding the Five Freedoms' that are supported by WOAHS.¹⁵⁵ WOAHS has recognized the

¹⁴⁹ Woods, 'Animal Welfare: An Emerging Investor Issue', *AMP Capital* (2021), available at www.ampcapital.com/europe/en/insights-hub/articles/2019/june/animal-welfare-an-emerging-investor-issue.

¹⁵⁰ European Bank for Reconstruction and Development, *Environmental and Social Policy* (2019).

¹⁵¹ See the references in section 2.

¹⁵² Seng and Laporte, 'Animal Welfare: The Role and Perspectives of the Meat and Livestock Sector', 24 *RST* (2005) 613, at 619.

¹⁵³ *Ibid.*, at 621; Maciel and Bock, 'Modern Politics in Animal Welfare: The Changing Character of Governance of Animal Welfare and the Role of Private Standards', 20 *International Journal of Sociology of Agriculture and Food* (2012) 219, at 223; Hobbs, Fearn and Spriggs, 'Incentive Structures for Food Safety and Quality Assurance: An International Comparison', 13 *Food Control* (2002) 77.

¹⁵⁴ On the relevance of the TAHC for voluntary corporate codes, see Thiermann and Babcock, 'Animal Welfare and International Trade', 24 *RST* (2005) 747, at 752. On such mixed public-private standards, see generally J. van Erp, M. Faure and A. Nollkaemper (eds), *Smart Mixes for Transboundary Environmental Harm* (2019).

¹⁵⁵ 'Animal Welfare at Cargill', *Cargill*, available at www.cargill.com/meat-poultry/animal-welfare-at-cargill. Lidl subjects sale-of-meat products in its supermarkets to compliance with husbandry conditions. See Peters, *supra* note 22, at 110. Walmart is said to ask suppliers of animal products to respect animal welfare standards. See S. Strom, 'Walmart Pushes for Improved Animal Welfare', *New York Times* (22 May 2015), available at www.nytimes.com/2015/05/23/business/walmart-pushes-for-improved-animal-welfare.html.

benefits of cooperation with private actors, which can support the operational implementation of the TAHC.¹⁵⁶ A key path is WOA's cooperation with the International Organization for Standardization (ISO). WOA brings to the ISO's normative guidance a basis for ISO standards, and the ISO brings to WOA an entry to implementation of the TAHC in the corporate sector. Based on a 2011 agreement,¹⁵⁷ the ISO adopted animal welfare standards that incorporate elements of the TAHC¹⁵⁸ and that allow businesses in the food supply chain to demonstrate their commitment to animal welfare to consumers and investors.¹⁵⁹ This will be more based on an assessment of the risks for investors than on genuine concern with animal welfare, but, either way, it may strengthen adherence to the TAHC.¹⁶⁰

To strengthen adherence by corporate actors to the TAHC, WOA has also engaged in alliances with non-governmental organizations (NGOs). For instance, in 2018, it signed a memorandum of understanding with the International Coalition for Animal Welfare¹⁶¹ to support the coalition in its efforts to support 'implementation, enforcement and promotion of WOA animal welfare standards'.¹⁶² For such NGOs, an alliance with WOA brings the authority of an international institution with state membership and expertise; for WOA, such alliances bring access to information on corporate practices and, potentially, additional incentives to bring corporate practices in line with the TAHC.¹⁶³

E Outlook

The support of global economic institutions and instruments for international animal welfare standards provides only the slimmest of inroads into a system that overwhelmingly continues to promote industrial meat production. But these inroads are not insignificant. They protect rights of states to set, under certain conditions, national

¹⁵⁶ WOA, OIE 7th Strategic Plan 2021–2026, OIE Doc. 88 SG/14 (2020), at 17.

¹⁵⁷ Cooperation Agreement between the International Organization for Standardization (ISO) and the World Organisation for Animal Health (OIE) 2011, available at https://www.woa.org/fileadmin/Home/eng/About_us/docs/pdf/accords/ISO_ENG.pdf; see also Peters, *supra* note 22, at 112.

¹⁵⁸ International Organization for Standardization (ISO), Animal Welfare Management: General Requirements and Guidance for Organizations in the Food Supply Chain, Doc. ISO/TS 34700:2016 (2021).

¹⁵⁹ Earlier studies have indicated that private corporations have multiple incentives to adopt, via ISO standards, public standards. See Soroshian, Cai Qi and Li Fei, 'Characterization of ISO 14001 Implementation', 27 *Environmental Quality Management* (2018) 97.

¹⁶⁰ See 'Factory Farming: Assessing Investment Risks', *Farm Animal Investment Risk and Return*, available at www.fairr.org/resources/reports/factory-farming-assessing-investment-risks (concluding that 'animal factory farms are vulnerable to at least 28 ESG issues that may damage their financial performance and returns').

¹⁶¹ Memorandum of Understanding between the World Organization for Animal Health (WOAH) and the International Coalition for Animal Welfare (ICAW) 2018, available at https://bulletin.woa.org/wp-content/uploads/2022/04/09-5-1-2022-2_202202-Renewal-MoU-ICAW.pdf.

¹⁶² 'Working Together to Raise Global Animal Welfare Standards', *International Coalition for Animal Welfare*, available at www.icfaw.org/our-work.

¹⁶³ This practice has also been recorded in other issue areas. See Abbott *et al.*, 'Orchestrating Global Governance: From Empirical Findings to Theoretical Implications', in K.W. Abbott *et al.*, *International Organizations as Orchestrators* (2015) 349.

animal welfare standards and promote adherence to international standards, thereby addressing one of the weaknesses of the TAHC – its voluntary nature and the absence of incentives for compliance. Even if this does not make the TAHC legally binding, it does give (legal) weight to animal welfare in the trade-off between various interests involved in global meat production and strengthens the position of WOA as an actor in an epistemic and political platform where the debate on the ways and means of animal welfare protection will take place.

5 Animal Welfare and Human Health

The practice of industrial meat production not only harms animals but also creates serious risks for global health. The FAO has observed that ‘livestock health is the weakest link in our global health chain’.¹⁶⁴ Institutional responses to these global health risks add one further set of principles and interests that must be considered in developing a global regime for meat production, which may impact on animal welfare. They also bring one further actor to the table in the form of the WHO. Its objective (‘the attainment by all peoples of the highest possible level of health’) certainly can be interpreted as extending to practices such as meat production, which adversely impact on global health.¹⁶⁵

Adding human health to the equation does not necessarily benefit animal welfare. Global health requirements can also pull in different directions from what is required for animal welfare. This is illustrated by cases where, to avoid the risk of human disease, all animals at farms located in high-risk zones were culled once a case was detected.¹⁶⁶ However, in some cases, the interests of global health may run parallel to the animal welfare agenda.¹⁶⁷ Regulation of the livestock industry to protect human health may have a beneficial impact on animal welfare – in particular, when it would lead to the reduction of production and consumption.¹⁶⁸ Whether the global health agenda will benefit animal welfare depends on an assessment of the specific interests

¹⁶⁴ FAO, *World Livestock 2013: Changing Disease Landscapes* (2013); Richi *et al.*, ‘Health Risks Associated with Meat Consumption: A Review of Epidemiological Studies’, 85 *International Journal for Vitamin and Nutrition Research* (2015) 70; Godfray *et al.*, ‘Meat Consumption, Health, and the Environment’, 361 *Science* (2018) 243; Horrigan, Lawrence and Walker, ‘How Sustainable Agriculture Can Address the Environmental and Human Health Harms of Industrial Agriculture’, 110 *EHP* (2002) 445.

¹⁶⁵ Farnese, ‘The Prevention Imperative: International Health and Environmental Governance Responses to Emerging Zoonotic Diseases’, 3 *TEL* (2014) 285, at 293.

¹⁶⁶ Espinosa, Tago and Treich, ‘Infectious Diseases and Meat Production’, *Environmental and Resource Economics* (2020) 1. Another example is the decision of the Danish government to cull 17 million minks after the report of mink-specific mutations of severe acute respiratory syndrome coronavirus 2 in humans. See Frutos and Devaux, ‘Mass Culling of Minks to Protect the COVID-19 Vaccines: Is It Rational?’, 38 *New Microbes and New Infections* (2020) 100816.

¹⁶⁷ For a plea for the development of international health law in this direction, see Gostin, DeBartolo and Katz, ‘The Global Health Law Trilogy: Towards a Safer, Healthier, and Fairer World’, 390 *The Lancet* (2017) 1918, at 1921–1922.

¹⁶⁸ Di Marco *et al.*, ‘Opinion: Sustainable Development Must Account for Pandemic Risk’, 117 *Proceedings of the National Academy of Sciences of the United States of America* (2020) 3888; Espinosa, Tago and Treich, *supra* note 166.

of animals and humans in a particular context. Two areas relating to global health are of particular importance to meat production: infectious diseases and antimicrobial resistance (AMR).

A *Infectious Diseases*

Agricultural practices have been associated with more than 50 per cent of zoonotic infectious diseases that have emerged in humans, and this number is likely to increase as agriculture expands and intensifies.¹⁶⁹ While much attention in relation to Covid-19 has focused on the interaction between wild animals and humans, industrialized meat production creates significant risks for infectious diseases¹⁷⁰ and, indeed, for pandemics.¹⁷¹ Drivers are the increased scale of disease impact, the immunosuppression of intensively farmed animals and the risks associated with transportation.¹⁷² The One Health Strategy, adopted in 2022 by the WHO, WOA, the FAO and UNEP, expressly identifies regulation of farming as a risk mitigation measure for pandemics.¹⁷³

Thus, the envisaged international instrument for preventing pandemics should consider the risks created by the livestock sector. While the form and contents of such an instrument are still under negotiation, from the information available and the documents released thus far, three observations can be made on the possible relevance of a global instrument for pandemics in relation to animal welfare.¹⁷⁴ First, the instrument is likely to provide a stronger, and possibly legal, basis for the approach of the One Health Strategy, building on an earlier One Health agenda agreed by the WHO WOA, the FAO and UNEP.¹⁷⁵ The One Health approach is relevant to animal welfare as it is premised on the idea that the health of people, animals and the wider environment

¹⁶⁹ Rohr *et al.*, 'Emerging Human Infectious Diseases and the Links to Global Food Production', 2 *Nature Sustainability* (2019) 445.

¹⁷⁰ Coker *et al.*, 'Towards a Conceptual Framework to Support One-Health Research for Policy on Emerging Zoonoses', 11 *The Lancet: Infectious Diseases* (2011) 326; Garcés, 'COVID-19 Exposes Animal Agriculture's Vulnerability', 37 *Agriculture and Human Values* (2020) 1; Lee, 'Industrial Animal Agriculture in the Pandemic Spotlight', Social Science Research Network Scholarly Paper ID 3810976, 28 March 2021; Espinosa, Tago and Treich, *supra* note 166; Liverani *et al.*, *supra* note 2.

¹⁷¹ UNEP and International Livestock Research Institute, *Preventing the Next Pandemic: Zoonotic Diseases and How to Break the Chain of Transmission* (2020); Espinosa, Tago and Treich, *supra* note 166.

¹⁷² Coker *et al.*, *supra* note 170; Espinosa, Tago and Treich, *supra* note 166.

¹⁷³ 'One Health Joint Plan of Action Launched to Address Health Threats to Humans, Animals, Plants and Environment', WOA (2022), at 27, available at www.woah.org/en/one-health-joint-plan-of-action-launched-to-address-health-threats-to-humans-animals-plants-and-environment/.

¹⁷⁴ This part is based on the text released in June 2023. WHO, Bureau's Text of the WHO Convention, Agreement or Other International Instrument on Pandemic Prevention, Preparedness and Response (WHO CA+), Doc. A/INB/5/6, 2 June 2023.

¹⁷⁵ UN Environment Assembly, *Animal Welfare–Environment–Sustainable Development Nexus*, Doc. UNEP/EA.5/Res.1 (2022); 'Strategic Framework for Collaboration on Antimicrobial Resistance: Together for One Health', WOA, available at www.woah.org/en/document/strategic-framework-for-collaboration-on-antimicrobial-resistance-together-for-one-health/.

are intertwined and need to be addressed in a coordinated manner.¹⁷⁶ The June 2023 draft recognizes that the majority of emerging infectious diseases and pandemics are caused by zoonotic pathogens, and it provides that states would commit to promote and implement a One Health Strategy that would involve ‘sustainably balancing and optimizing the health of people, animals and ecosystems’.¹⁷⁷

Acceptance of the One Health approach in a pandemics instrument will not necessarily mean that animal welfare will be treated on a par with the interests of global health. Until now, One Health documents have tended to frame the causality of human–animal relations as being one directional: humans are those who suffer from AMR, ‘while animals are presented mainly as potential risk factors for human health’.¹⁷⁸ Given the overriding interests of preventing pandemics, it is not to be expected that a pandemics instrument will lead to a reversal of this trend. Nonetheless, the One Health approach does provide a conceptual framework and perhaps the root of an emerging principle, which calls for consideration of global health and animal health and welfare in their mutual relationship.

Second, the pandemics instrument would provide firmer ground for a general obligation to prevent pandemics, which should have implications for intensive meat production where it creates risks of pandemics. Such an obligation was accepted in 2021 by the Institut de Droit International in its resolution on pandemics,¹⁷⁹ and the pandemics instrument will build on this. In legal terms, this is only a variation on the generally accepted principle that states should not allow the use of their territory to cause damage to other states,¹⁸⁰ but the express application to pandemics for the first time creates awareness that this obligation may require states to regulate and reduce the production and consumption of meat, with a view to reducing the risk of pandemics.¹⁸¹ The June 2023 text expressly calls for preventive measures concerning farms for food producing, taking into account the relevant international standards, which include animal welfare support measures.¹⁸²

Third, the negotiations on a pandemics instrument are likely to set up a new institutional structure (with a lead role for the WHO and the participation of WOA) that adds one further leg to the already complex institutional setting for addressing

¹⁷⁶ Ad hoc Interagency Coordination Group (IACG) on Antimicrobial Resistance, *No Time to Wait: Securing the Future from Drug-Resistant Infections* (2019). In 2022, the Quadripartite adopted a five-year action plan for One Health to provide for such coordinated policies. One Health Joint Plan of Action (2022–2026) Working Together for the Health of Humans, Animals, Plants and the Environment (2022).

¹⁷⁷ WHO, *supra* note 174.

¹⁷⁸ Kamenshchikova *et al.*, ‘Anthropocentric Framings of One Health: An Analysis of International Antimicrobial Resistance Policy Documents’, 31 *Critical Public Health* (2021) 306.

¹⁷⁹ This document stipulates that ‘[e]very State has the obligation to prevent, reduce and control epidemics and accordingly to exercise due diligence in taking appropriate legislative, administrative, judicial and other measures in accordance with applicable rules of international law’. Institut de Droit International, *Resolution on Epidemics, Pandemics and International Law* (2021).

¹⁸⁰ *Nuclear Weapons in Armed Conflict*, *supra* note 73, at 226, 241.

¹⁸¹ Espinosa, Tago and Treich, *supra* note 166; Böll Stiftung, *supra* note 2, at 47; L. Gostin, ‘Strengthening International Legal Authorities to Advance Global Health Security’, *Bill of Health* (29 September 2021), available at <http://blog.petriefflom.law.harvard.edu/2021/09/29/pandemic-treaty-health-security/>.

¹⁸² WHO, *supra* note 174, Art. 4.

the global meat production process. Early proposals provide for the creation of a COP that shall review the implementation of the instrument and take decisions necessary to promote its effective implementation.¹⁸³ The interests of animal welfare would be represented as the WHO, in cooperation with WOAAH, the FAO and UNEP, is to provide coordination with the competent international organizations.¹⁸⁴ While risks posed by industrial farming are only one of many risks for pandemics, this would create a new political forum, guided by new principles, that could consider the connection between meat production, animal health and welfare as well as the risks for global health.

B Antimicrobial Resistance

The widespread use of antibiotics is a key feature of the architecture of industrial meat production as it serves to prevent diseases and drive production growth.¹⁸⁵ This practice contributes both to animal suffering and to the risks for human health in the form of AMR.¹⁸⁶ In recent years, concerns over the impact of AMR on human health have led the WHO to collaborate with WOAAH, the FAO and UNEP in the so-called Quadripartite to curtail the use of antibiotics in livestock farming.¹⁸⁷ Potentially, this cooperation, while driven by human health concerns, could contribute to the welfare of farm animals, as substantial reductions in the use of antibiotics to prevent AMR may reduce unnecessary use of antibiotics for animals and may spur alternative, less intensive ways of farming.¹⁸⁸

So far, the normative push of an agenda to reduce risks for AMR has not acquired the political support that the pandemics prevention agenda has, and it has remained below the radar of international law. Key documents include a joint recommendation by the WHO and WOAAH to reduce the use of antimicrobials when not needed for the treatment of the diseases of individual animals,¹⁸⁹ the WHO's List of

¹⁸³ *Ibid.*

¹⁸⁴ *Ibid.*

¹⁸⁵ Kirchhelle, 'Pharming Animals: A Global History of Antibiotics in Food Production (1935–2017)', 4 *Palgrave Communications* (2018) 1; Castanon, 'History of the Use of Antibiotic as Growth Promoters in European Poultry Feeds', 86 *Poultry Science* (2007) 2466.

¹⁸⁶ Report of the Secretary-General, Follow-up to the Political Declaration of the High-Level Meeting of the General Assembly on Antimicrobial Resistance, UN Doc. A/73/869 (2019).

¹⁸⁷ In 2010, the FAO, the OIE and the WHO formed the Tripartite. See The FAO-OIE-WHO Collaboration. Sharing Responsibilities and Coordinating Global Activities to Address Health Risks at the Animal-Human-Ecosystems Interfaces. A Tripartite Concept Note (2010). In 2022, the Tripartite organizations signed a partnership with UNEP, turning the Tripartite into a Quadripartite. See UNEP, UNEP Joins Alliance to Implement One Health Approach (18 March 2022), available at <https://www.unep.org/news-and-stories/press-release/unep-joins-alliance-implement-one-health-approach>.

¹⁸⁸ Kirchhelle, *supra* note 185, at 10 (noting that 'regulating these supply chains and reducing antibiotic consumption will require global solutions').

¹⁸⁹ IACG on Antimicrobial Resistance, *supra* note 176. This aim was included in the 2013 Chennai Declaration, which recommends 80 per cent compliance with the rule that antibiotics used for human treatment will not be used for growth promotion in food animals. See Chennai Declaration Team, 'Chennai Declaration: 5-Year Plan to Tackle the Challenge of Anti-Microbial Resistance', 32 *Indian Journal of Medical Microbiology* (2014) 221.

Critically Important Antimicrobials for Human Medicine,¹⁹⁰ the WHO Guidelines on Antimicrobials,¹⁹¹ the Codex Alimentarius Code of Practice to Minimize and Contain Antimicrobial Resistance¹⁹² and the TAHC standards for use of antibiotics for animals,¹⁹³ including the principle of responsible and prudent use.¹⁹⁴ There is some evidence that international policies on AMR, based on these documents, have had an impact. WOAHP reported that the use of antibiotics in animal farming had been reduced by 27 per cent between 2016 and 2018 and that almost 70 per cent of member states reported that they no longer use antimicrobial agents for growth promotion.¹⁹⁵

However, none of these documents has curtailed the legal liberty of states and corporations to continue with an industrial farming system premised on the massive use of antibiotics. Only the EU has adopted legal obligations for reducing the use of antibiotics in the livestock sector, aligned with the WHO and WOAHP strategies.¹⁹⁶ At the global level, states so far have shown little appetite for binding obligations on the topic;¹⁹⁷ even a voluntary code that WOAHP, the WHO and the FAO envisaged in 2018 has not been adopted.¹⁹⁸ So far, states have favoured the liberty of production and the access to cheap meat over agricultural and antibiotic reform.¹⁹⁹

Notwithstanding the non-binding nature of the key documents, international cooperation on AMR has provided two major impulses to the development of a global regime that is relevant to meat production and animal welfare. The first is that the AMR agenda was the major driver of the setting up of the Quadripartite, a framework for cooperation between the WHO, the FAO, the WOAHP and UNEP. The Quadripartite, little known to international lawyers, presents a forum for cooperation by the epistemic communities of the four institutions.²⁰⁰ It also provides, for the first time, an institutional framework where the partly aligned, but partly conflicting, interests can be articulated and weighed in relation to both AMR and

¹⁹⁰ WHO, Critically Important Antimicrobials for Human Medicine, 6th rev. (2019), available at www.who.int/publications/i/item/9789241515528.

¹⁹¹ Aidara-Kane *et al.*, 'World Health Organization (WHO) Guidelines on Use of Medically Important Antimicrobials in Food-Producing Animals', 7 *Antimicrobial Resistance and Infection Control* (2018) 7.

¹⁹² FAO/WHO, Codex Alimentarius Code of Practice to Minimize and Contain Antimicrobial Resistance, Doc. CXC 61-2005 (2005).

¹⁹³ TAHC, *supra* note 22, para. 6.10.2.

¹⁹⁴ WOAHP, List of Antimicrobial Agents of Veterinary Importance, Resolution no. XXVIII (2007).

¹⁹⁵ WOAHP, Sixth Annual Report on Antimicrobial Agents Intended for Use in Animals (2022), available at www.woah.org/en/document/annual-report-on-antimicrobial-agents-intended-for-use-in-animals/.

¹⁹⁶ European Parliament and Council Regulation (EU) 2019/6 on Veterinary Medicinal Products and Repealing Directive 2001/82/EC, OJ 2018 L 4, at 43 (8. allowing the use of antimicrobial medicinal products only in well-defined cases).

¹⁹⁷ Padiyara, Inoue and Sprenger, 'Global Governance Mechanisms to Address Antimicrobial Resistance', 11 *Infectious Diseases: Research and Treatment* (2018) 1178633718767887. See the overview in Årdal *et al.*, 'International Cooperation to Improve Access to and Sustain Effectiveness of Antimicrobials', 387 *The Lancet* (2016) 296; Gozdzielewska *et al.*, 'Scoping Review of Approaches for Improving Antimicrobial Stewardship in Livestock Farmers and Veterinarians', 180 *Preventive Veterinary Medicine* (2020) 105025.

¹⁹⁸ FAO, OIE and WHO, Memorandum of Understanding, 30 May 2018, available at http://www.oie.int/fileadmin/Home/eng/Media_Center/docs/pdf/onehealthportal/MoU_Tripartite_Signature_May_30_2018.pdf.

¹⁹⁹ Kirchhelle, *supra* note 185.

²⁰⁰ IACG on Antimicrobial Resistance, *supra* note 176, at 7.

pandemic risks. Second, the cooperation within the Quadripartite has pushed the common conceptual framework of the One Health Strategy, well before it was incorporated in the draft pandemic instrument.²⁰¹ The premise that the health of people, animals and the wider environment are intertwined and need to be addressed in a coordinated manner is indeed particularly relevant to the use and effects of antibiotics.²⁰² While we should also observe that the One Health Strategy so far has been more construed as a concept that serves the interests of human health,²⁰³ it has contributed to a normative framework for addressing, and, where necessary, balancing, the interests of animals and humans.

6 Animal Welfare and the Global Environment

The impact of the intensive meat production industry on the global environment presents yet another driver for the international regulation of the industrial meat industry. Intensive livestock production – in particular, the application of synthetic nitrogen fertiliser and manure to croplands and grasslands and the management, accumulation and transport of manure – has resulted in a range of global environmental problems,²⁰⁴ including climate change, air pollution, the pollution of freshwater and coastal areas and the loss of biodiversity.²⁰⁵ Regulations that aim at environmental protection from meat production may lead to restrictions on intensive farming and, indirectly, may benefit animal welfare. Of the range of regulatory initiatives, two are particularly important, relating to climate change and nitrogen pollution.

A Climate Change

The livestock sector is responsible for about 14.5 per cent of global greenhouse gas (GHG) emissions²⁰⁶ – in particular, those resulting from land use change for feed production, animal production, manure and processing and transport.²⁰⁷ International regulatory initiatives to reduce GHG from this sector may have an impact on the scope or modalities of meat production and, indirectly, may benefit animal welfare. For instance, regulations that seek to facilitate the transition to more extensive systems of

²⁰¹ UN Environment Assembly, *supra* note 175; IACG on Antimicrobial Resistance, *supra* note 176.

²⁰² IACG on Antimicrobial Resistance, *supra* note 176. One Health Joint Plan of Action, *supra* note 176.

²⁰³ Kamenshchikova *et al.*, *supra* note 178.

²⁰⁴ FAO, Livestock's Long Shadow. Environmental Issues and Options 2006, available at <https://www.fao.org/3/a0701e/a0701e00.htm>; Kraham, *supra* note 27; T. Banhazi, A. Aland and J. Hartung, *Air Quality and Livestock Farming* (2018); Machovina, Feeley and Ripple, 'Biodiversity Conservation: The Key Is Reducing Meat Consumption', 536 *Science of the Total Environment* (2015) 419.

²⁰⁵ Uwizeye *et al.*, 'Nitrogen Emissions along Global Livestock Supply Chains', 1 *Nature Food* (2020) 437.

²⁰⁶ Climate and Clean Air Coalition and UNEP, Global Methane Assessment (2021); Kysar and Lovvorn, 'Climate Change and Animal Production', in A. Peters, K. Stilt and S. Stucki (eds), *The Oxford Handbook of Global Animal Law* (forthcoming; on file with author); Rojas-Downing *et al.*, 'Climate Change and Livestock: Impacts, Adaptation, and Mitigation', 16 *Climate Risk Management* (2017) 145.

²⁰⁷ Rojas-Downing *et al.*, *supra* note 206.

meat production and to change diets to more nutritious feed²⁰⁸ could lead to both a reduction of GHG emissions and the improvement of animal welfare (although they may result in different environmental problems).²⁰⁹

The connection between the livestock sector and climate change adds one more actor to the regime complex for meat production. The powers of the COP to the UNFCCC extend to activities that contribute to climate change; these certainly include meat production.²¹⁰ Since climate change also presents a major global health risk, the topic is also within the scope of the activities of the Quadripartite, which brings WOAAH to the table, but its role in relation to climate change is different from its role in relation to pandemics and AMR. Although WOAAH has addressed the effects of climate change on animals,²¹¹ the contributions of the livestock sector to climate change lie at the structural level of the supply and demand of meat rather than the type of animal welfare and health issues that are within the mandate of WOAAH.

Three parts of the climate change regime are particularly relevant for the livestock sector. First, the general obligation to prevent harm to the environment of other states and to areas outside national jurisdiction²¹² certainly applies to activities that contribute to climate change.²¹³ Comparable to the general obligation to prevent pandemics, the performance of this obligation will need to consider and, where necessary, address contributions to climate change by the livestock sector.

Second, the aim of the Paris Agreement to limit temperature increases to 1.5 degrees Celsius above pre-industrial levels likewise is relevant.²¹⁴ States can contribute to their targets by changing livestock practices. However, the agreement does not specifically require states to regulate the meat sector to reduce emissions; it leaves it up to states to determine in which sectors and by what means they will reach reductions. The Global Methane Pledge is the third building block that is relevant to meat production.²¹⁵ Since meat production is an important source of methane emissions, the pledge to reduce global methane emissions by at least 30 per cent from 2020 levels by 2030, which has been signed by 125 states, may require interventions in meat production. The pledge does not require concrete action related to meat production, and states may fulfil the pledge while leaving unaffected industrial meat production. However, it has set in motion a process, guided by the Koronivia Joint Work Group on Agriculture

²⁰⁸ For overview of measures, see *ibid*; Van den Toorn, Worrell and Van den Broek, 'How Much Can Combinations of Measures Reduce Methane and Nitrous Oxide Emissions from European Livestock Husbandry and Feed Cultivation?', 304 *Journal of Cleaner Production* (2021) 127138.

²⁰⁹ UN Environment Assembly, *supra* note 175 (acknowledging 'that animal welfare can contribute to addressing environmental challenges').

²¹⁰ United Nations Framework Convention on Climate Change (UNFCCC), 1992, 1771 UNTS 107, at 165.

²¹¹ See, e.g., 'The Implications of Climate Change for Veterinary Services', WOAAH, available at www.woah.org/en/document/the-implications-of-climate-change-for-veterinary-services/.

²¹² *Nuclear Weapons in Armed Conflict*, *supra* note 73.

²¹³ B. Mayer and A. Zahar, *Debating Climate Law* (2021), at 15.

²¹⁴ Paris Agreement on Climate Change, UN Doc. FCCC/CP/2015/L.9/Rev.1, 12 December 2015, Art. 2(1) (a).

²¹⁵ European Commission, Launch by United States, the European Union, and Partners of the Global Methane Pledge to Keep 1.5C within Reach, Doc. Statement/21/5766 (2021); Kysar and Lovvorn, 'Climate Change and Animal Production', in Peters, Stilt and Stucki, *supra* note 206.

set up in 2017 by COP-18,²¹⁶ to collect information on GHG emissions from the livestock sector. The FAO has set up a similar process to examine how methane emissions can be reduced in the agricultural sector, including livestock.²¹⁷ These processes can eventually provide input to the further development of the climate change regime by the COP in relation to meat production.

The evolving agenda of the EU in relation to climate change illustrates the type of measures that may be required for a push to drive down emissions from meat production. Perhaps helped by the fact that EU meat consumption is expected to decline by 2030,²¹⁸ this agenda includes a proposal to boost the production of plant proteins; to encourage the production of plant-based alternatives over animal-based products;²¹⁹ and to reduce consumption and production of meat through information, improved availability of alternatives, prices and tax incentives.²²⁰ At the global level, these types of measures for now are beyond the horizon, and it will be up to the Koronivia Joint Work Group on Agriculture and, eventually, the COP to articulate standards that give concrete substance to a reduction of the contribution that the meat production sector makes to climate change.

B Nitrogen Pollution

The livestock sector has contributed significantly to the problem of nitrogen pollution, with adverse effects on biodiversity and the wider environment. There is good authority for the proposition that reduction in the production and consumption of meat products is ‘necessary to keep global [nitrogen] emissions within planetary boundaries’.²²¹ Not all of the measures to reduce nitrogen emissions will benefit animals,²²² but some policies that aim to reduce the environmental effects of nitrogen on the environment and humans may well benefit animal welfare. For instance, in the Netherlands, concerns over nitrate pollution have led to the introduction of a subsidy programme for farms that go out of the business of intensive livestock farming and a

²¹⁶ Conference of the Parties, Report of the Conference of the Parties on Its Twenty-Third Session. Addendum. Part Two: Action Taken by the Conference of the Parties at Its Twenty-Third Session, Doc. FCCC/CP/2017/11/Add.1 (2018).

²¹⁷ Livestock Environmental Assessment and Performance Partnership, ‘Launch of Public Review: Methane Emissions in Livestock and Rice Systems’, FAO, available at www.fao.org/partnerships/leap/news-and-events/news/detail/en/c/1608696/.

²¹⁸ European Commission, EU Agricultural Outlook for Markets, Income and Environment, 2021–2031 (2021), at 29.

²¹⁹ European Commission, Report from the Commission to the Council and the European Parliament on the Development of Plant Proteins in the European Union, Doc. COM/2018/757 final (2018).

²²⁰ European Commission, *supra* note 100.

²²¹ Poore and Nemecek, ‘Reducing Food’s Environmental Impacts through Producers and Consumers’, 360 *Science* (2018) 987; Springmann *et al.*, ‘Options for Keeping the Food System within Environmental Limits’, 562 *Nature* (2018) 519; Uwizeye *et al.*, *supra* note 205, at 443.

²²² For instance, the distribution of livestock production just means suffering in different places, and in China such measures appear to aim to realize more livestock protein with fewer animals and less total pollution impact. See Zhu *et al.*, ‘Integrated Livestock Sector Nitrogen Pollution Abatement Measures Could Generate Net Benefits for Human and Ecosystem Health in China’, 3 *Nature Food* (2022) 161.

scheme to reduce the number of dairy cows and young cattle.²²³ In addition, measures to address nitrogen pollution such as breeding and feeding management may have a positive impact on animal welfare.²²⁴

The connection between the industrial livestock sector, nitrogen pollution and, at least potentially, animal welfare brings a further set of institutions to the virtual table where the possible regulation of global meat production is discussed. These include the parties to the Convention on Biological Diversity (CBD)²²⁵ that have adopted the Aichi Biodiversity Targets, requiring that by 2020 pollution from excess nutrients be brought to levels that are not detrimental to ecosystem function and biodiversity.²²⁶ The parties to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention)²²⁷ have called for the reduction of the input of nutrients from agriculture.²²⁸ The FAO has developed a programme to compile information on livestock and the environment²²⁹ and has set up a Livestock Environmental Assessment and Performance Partnership, in which WOAHP will participate.²³⁰ The most comprehensive agenda is driven by the UNEP Assembly, which in 2019 set up an intergovernmental mechanism for the coordination of nitrogen policies.²³¹

The UNEP-driven process so far has not affected international obligations and the liberties of states. Initial discussions indicated that states showed little support for a global convention relating to nitrogen pollution,²³² and the process is now geared to setting up a mechanism for inter-convention nitrogen coordination²³³ among various relevant instruments, including the CBD,²³⁴ the UNFCCC,²³⁵ the Convention on Long-Range Transboundary Air Pollution²³⁶ and the Global Programme for Action on the Protection of the Marine Environment from Land-based Activities so as to enhance

²²³ 'More Nitrogen Polluters to Be Targeted; Most Farmers Claim No Negative Influence on Environment', *NL Times* (22 October 2022), available at <https://nltimes.nl/2022/10/22/nitrogen-polluters-targeted-farmers-claim-negative-influence-environment>.

²²⁴ Zhu *et al.*, *supra* note 222; Dijkstra, Oenema and Bannink, 'Dietary Strategies to Reducing N Excretion from Cattle: Implications for Methane Emissions', 3 *Current Opinion in Environmental Sustainability* (2011) 414.

²²⁵ Convention on Biological Diversity (CBD) 1992, 1760 UNTS 79, at 143.

²²⁶ CBD, Key Elements of the Strategic Plan 2011–2020, Including Aichi Biodiversity Targets (2018).

²²⁷ Convention for the Protection of the Marine Environment of the North-East Atlantic 1992, 2354 UNTS 67.

²²⁸ OSPAR Commission, Nutrients in the Convention Area Inputs of Nutrients into the Convention Area Implementation of PARCOM Recommendations 88/2 and 89/4 (2003).

²²⁹ 'Livestock and the Environment', FAO, available at <http://www.fao.org/livestock-environment/en>.

²³⁰ 'Partners, Livestock Environmental Assessment and Performance', FAO, available at www.fao.org/partnerships/leap/partners/en/.

²³¹ UN Environment Assembly, Sustainable Nitrogen Management, Doc. UNEP/EA.4/L.16, 28 March 2019.

²³² Fourth Meeting of the International Nitrogen Management System (INMS-4): Summary of the High-Level Segment (2019).

²³³ Report of the First E-Briefing for the Nitrogen Working Group of the United Nations Environment Programme: Implementation of the UNEA-4 Resolution on Sustainable Nitrogen Management (2020).

²³⁴ CBD, *supra* note 225.

²³⁵ UNFCCC, *supra* note 210.

²³⁶ Convention on Long-Range Transboundary Air Pollution 1979, 1302 UNTS 217. On the application of this convention to nitrogen, see Report of the First E-Briefing, *supra* note 233, para. 42.

the consistency of actions taken by member states.²³⁷ The regulatory initiatives in relation to nitrogen pollution all stop short of legally binding restrictions on intensive animal farming. But, in combination with and comparable to the situation in relation to infectious diseases, AMR and climate change, these initiatives have widened the grounds and principles that will inform further political discussions and future standards relating to the global meat production process, and they have brought more actors into the process within which decisions pertaining to the future of global meat production, with possible effects for animal welfare, will take place.

7 Conclusions and Outlook

The main lines of this article can be brought together in seven points, which capture the state of international law relating to the welfare of animals in industrial farming and identify building blocks for the further development of the regime. First, animal welfare in industrial meat production is a global problem that requires global policies and regulations that complement national and regional regulation. This stems from the global nature of the meat production process, the multinational nature of meat-producing corporations, transnational consumer practices and the intimate connection with global economic processes and with global risks for health, the climate and the wider environment.²³⁸ As such, the protection of animals in industrial meat production is indeed an interest that is, and should be, within the purview of international law.

Second, most of the international initiatives that (may) contribute to the protection of animal welfare in the global meat-production process, including the WOAHS standards and the various initiatives relating to global health, climate change and biodiversity, remain well below the radar of international law.²³⁹ One could say that the glass of international law for animal welfare remains largely empty and that the main role of international law in this field remains that it provides the freedom to cause animal suffering. This latter observation certainly has merit, but, at the same time, this negative assessment would understate the range and scope of initiatives in the past decades, which have expanded the grounds of regulation, the principles and interests on which future regulations are to be based and the actors involved in that process. These initiatives provide a platform for actors across the world seeking to pursue the agenda of animal welfare at the global level, potentially leading to cementing its position in international law.

Third, the global nature of the problems of animal welfare in meat production should not blind us to the significant differences between regions, states and cultures. The fact that by far the most developed regulations have been developed in Europe, and

²³⁷ Report of the First E-Briefing, *supra* note 233, para. 56.

²³⁸ Peters, *supra* note 109.

²³⁹ The conclusion that Otter, O'Sullivan and Ross, *supra* note 29, drew in 2012 ('examination of the most prominent international animal regulatory instruments reveals that a transnational animal protection regime does not exist at present') remains, at least in legal terms, largely valid.

that the EU, with its FTAs, has actively promoted animal welfare standards elsewhere in the world, brings uneasy recollections of other European universalizing agendas. While respect for animal welfare is well entrenched in all cultures and is not at all a western concept, and while WOAAH has found partners in all regions, the ways in which the moral values of animal welfare are given shape in a particular region may differ widely. Such differences will and should shape the direction of the development of international law on animal welfare.

Fourth, our empirical understanding of how parts of the regime complex for animal welfare impact on one another, and on animal welfare, is limited. While some international standards (for example, the limitation of subsidies) are likely to address multiple problems at the same time, other standards may solve one problem but may cause another (for example, global health principles may require culling of healthy livestock), and, for still other standards, we simply do not know what their effects on the multiple interests that are at issue in global meat production will be. The question of what causal impact regulations adopted for animal welfare, global health or environmental protection will have on each other, and where we find conflicts, synergies and space for coordination, represents an important research agenda.

Fifth, the choice for or against particular instruments, and, more generally, the further development of international law for the protection of animals, is based not only on an understanding of the possible impact of regulations on animal welfare and other interests but also, above all, on normative choices. This holds first and foremost for the trade-off between food security and animal welfare. Further normative questions present themselves in and between the regimes for global health, climate change and the environment – for instance, between different paths for reaching the goals of the Paris Agreement and between different paths for reducing risks for pandemics.

Sixth, these normative questions for the development of international law on animal welfare pose institutional challenges. The present institutional landscape for meat production is highly fragmented, and different institutions serve different interests. To some extent, WOAAH is the spider in the web, but its mandate is constrained by the animal health tasks for which it was originally established. Its relatively limited resources and the fact that it operates primarily at the level of experts are also not conducive to an impact on the political debate and the development of international law. The establishment of the Quadripartite in 2022, while far under the radar of international law and international lawyers, presents an opportunity for a confrontation and, where possible, coordination of the interests involved, though we should recognize that animal welfare is low on its agenda. In light of the fundamental normative (and political) choices that the development of the global agenda relating to meat production entails, this initiative will only be able to make an impact on the development of the global regime if the now overwhelmingly technical nature of this institution is connected to the political level in the UN.

Seventh and finally, in the past two decades, bits and pieces of a normative framework for the protection of farm animals in industrial meat production have emerged. This framework includes the right of states to set national animal welfare standards, the basic animal welfare standards of the TAHC, the One Health Strategy of the

Quadripartite (even though this is aimed at human health rather than animal health and welfare), the general principle that calls for the prevention of risks for pandemics, the standard of responsible and prudent use of antibiotics in industrial farming, the general principle that calls on states to prevent contributions, also from industrial farming, to climate change, the requirement to reduce nitrogen pollution from industrial farming where it threatens biodiversity as well as procedural principles of cooperation and notification in cases of risks of diseases. The development of international law relating to animal welfare would be well served by building on these initiatives and by drafting a global resolution on animal welfare, eventually for consideration in the UN General Assembly.²⁴⁰ Such a document would consolidate what has been achieved so far and provide the basis for the further development of international law.

²⁴⁰ Gibson, 'The Universal Declaration of Animal Welfare', 16 *Deakin Law Review* (2011) 539.