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. 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.


yields of output per animal. Industrial animal farming continues to expand in order to meet the nutritional needs of a growing world population with rising incomes. 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’. 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; and consumers who overwhelmingly opt for cheap and accessible meat. Industrial meat production is ubiquitous in North America and Europe, and it has expanded to other regions. In most of Africa, meat is overwhelmingly produced by smallholder farmers, but industrial meat production has a growing share of the market – in particular, in South Africa. In Asia, much production remains rural and agricultural based, but in China, industrial farming has become dominant. And while in Latin America too, the meat production process is diverse and many states use the wide grasslands of the continent, production has industrialized significantly in Argentina and Brazil.

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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.


7 Böll Stiftung, supra note 2.


During industrial meat production, cattle, pigs, poultry and sheep live and die in unspeakable agony.\textsuperscript{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’.\textsuperscript{16} Ezra Klein titled his article in the \textit{New York Times}: ‘We Will Look Back on This Age of Cruelty to Animals in Horror.’\textsuperscript{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.\textsuperscript{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.\textsuperscript{19} The World Organisation for Animal Health (WOAH) has played a leading role in this process.\textsuperscript{20} In 2002, it became the first global organization with a mandate to protect animal welfare,\textsuperscript{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.\textsuperscript{22}

\textsuperscript{15} For an overview of animal welfare challenges in intensive meat production, see Cronin, Rault and Glatz, \textit{supra} note 2, at 153.
\textsuperscript{18} See section 2.
\textsuperscript{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 Epizooties (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/?officiel=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.
\textsuperscript{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, \textit{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 WOAH 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 WOAH. As a result, they may do what WOAH 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).
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, WOAH 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. 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. To fill this gap, this article addresses the question of how WOAH 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. 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 WOAH); the different weight attached to animal welfare in different institutions; and the ways in which multiple institutions combine to provide governance capabilities (normative guidance, regulatory instruments, technical expertise, enforcement capacity) in relation

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31 Zürn, Nollkaemper and Peerenboom, supra note 30.
to animal welfare that any single institution lacks. Through this lens, I will assess the practice of WOAH 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 WOAH 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’, 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 liberties 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. 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

33 Harari, supra note 16.
35 See section 3.C.
large numbers of animals in housing units, the use of concentrated feed, vertical integration and industrial management practices allowed states and agricultural corporations to achieve higher yields of output per unit of input. 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. 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 market and for growing cattle feed. 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. As Joseph E. Stiglitz noted, agricultural liberalization was ‘imposed’ primarily on developing countries ‘in dire need of money’.

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. 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. 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.

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36 Liverani et al., supra note 2, at 873.
39 Rifkin, supra note 4 at 147.
40 Ibid., 162.
is evidence that such agreements have indeed increased foreign investment in the agricultural sector.  

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.  

Trade has risen from €56 billion in 2000 to €152 billion in 2018 and is expected to continue growing, largely due to an increase in consumption of animal proteins in Asian countries.  

The 1994 Agreement on Agriculture, the 1994 General Agreement on Tariffs and Trade (GATT 1994) and free trade agreements (FTAs) 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. In this context,
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

58 Committee on World Food Security, Committee on World Food Security Principles for Responsible Investment in Agriculture and Food Systems (2014), para. 128.
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 WOAH to broaden its activities beyond animal health.\(^{62}\) To assess what has been done and what can be expected from WOAH, the following sections discuss the legal basis for WOAH to widen its activities to animal welfare, the standards that it has set and its activities to support regional implementation of these standards.

### A WOAH’s Legal Powers in Relation to Animal Welfare

The 28 states that set up WOAH in 1924 did not have animal welfare on their mind. The Organic Statutes, which are an integral part of the 1924 agreement, stipulate that WOAH’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, WOAH nonetheless included animal welfare in its 2001–2005 Strategic Plan, which envisaged that WOAH 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, WOAH 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 WOAH 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 WOAH 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

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\(^{63}\) Organic Statutes, supra note 60, Art. 4.

\(^{64}\) Petriini 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.

did not consider it necessary to amend the agreement and to make animal welfare an explicit objective of the agreement.\textsuperscript{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.’\textsuperscript{69}

Reading animal welfare into the objectives of WOAH can in part rest on the close relationship between animal health and animal welfare. WOAH’s definition of animal welfare incorporates health.\textsuperscript{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 WOAH’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.\textsuperscript{71} For another part, a dynamic interpretation can be grounded on WOAH’s practice in relation to animal welfare and the support that its member states have given to this practice.\textsuperscript{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

\textsuperscript{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’.

\textsuperscript{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/.

\textsuperscript{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 \textit{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 \textit{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’).

\textsuperscript{71} Petrini and Wilson, supra note 62, at 666.

\textsuperscript{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 will 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

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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.
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. Although the Organic Statutes stipulate that the office can ‘examine international draft agreements regarding animal sanitary measures’, 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. This holds first and foremost for the concept of animal welfare. The TAHC defines animal welfare in general terms, 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 WOAH, 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. 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 WOAH 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 WOAH 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, information on actual compliance with the TAHC is sparse. In 2018, WOAH set up the WOAH Observatory to systematically observe and analyse members’ implementation of the TAHC. The first results, published in 2022, demonstrate significant gaps in information on national regulations that implement the TAHC and, to the extent such information

81 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.
82 Ibid., Art. 4(c).
83 Bonnet et al., supra note 6.
84 TAHC, supra note 22; see also Fraser, supra note 70; Hewson, supra note 70.
85 Peters, supra note 22, at 89–90.
is available, signal a strong discrepancy between Europe and other regions.\textsuperscript{91} WOAH has few powers to compel states to improve compliance.

\textbf{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.\textsuperscript{92} The European Union (EU) has taken these obligations a step further in its farming directive of 1998\textsuperscript{93} and in subsequent instruments addressing transport\textsuperscript{94} and slaughter\textsuperscript{95} and specific groups of animals, including calves,\textsuperscript{96} chickens\textsuperscript{97} and pigs.\textsuperscript{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)\textsuperscript{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.\textsuperscript{100} None of this is on the agenda of WOAH, and this strategy is the single example where regional developments significantly go beyond the global agenda.

\textsuperscript{91} WOAH, Implementation of WOAH Standards: The Observatory Annual Report (2022).


\textsuperscript{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. WOAH 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, WOAH 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 Africa and the African Platform for Animal Welfare. These initiatives seek to support implementation of the TAHC by awareness raising and training of farming practices. In the Americas, WOAH has set up a Regional Strategy for Animal Welfare for the Americas in 2012, which is to coordinate the regional implementation of the TAHC. And, for Asia, where support for demanding animal welfare standards has been limited, WOAH has helped to develop the 2008 wider Regional Animal Welfare Strategy for Asia, the Far East and Oceania.

The transposition of the WOAH standards to regional institutions is a good example of how WOAH works with other institutions to accomplish what it cannot do alone. WOAH provides normative guidance and expertise to regional institutions; in return, such institutions provide WOAH 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.

With the exception of the EU, all of this remains below the radar of international law. WOAH 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

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106 Nizamuddin and Rahman, supra note 10.
108 The 2022 WOAH Observatory report indicates that compared to Europe, little information on implementation of the TAHC is available in other regions. See WOAH, 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, WOAH 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 WOAH alone is not well positioned to realize structural differences. This is illustrated by the fact that WOAH’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. WOAH’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 WOAH 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 WOAH 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

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, and in *US – Tuna II*, which provides authority for the proposition that animal welfare qualifies as a legitimate objective under the TBT Agreement. Also several investment treaties and FTAs 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). This agreement rules out certain

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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.

national regulations dealing with animal health but allows them when they are necessary, non-discriminatory and based on international standards; national measures are deemed to be compatible with the SPS Agreement if they are based on the TAHC. The SPS Agreement thus incentivizes application of the international health standards in the TAHC, even though this does not mean that national standards have to conform to the TAHC. This normative connection is supplemented by an institutional connection between WOAH and the WTO; WOAH 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.

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, labeling requirements – will be subject to the TBT Agreement. The TBT Agreement rules out such standards, unless they pursue legitimate objectives and are based on international standards. Although the TBT Agreement does not mention animal welfare and, in contrast to the SPS Agreement, does not refer to the TAHC, 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’, 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. And while the TBT Agreement does not expressly create

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 WOAH standards. See WOAH, supra note 91, at 44.
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 WOAH 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.
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.\(^{133}\) WOAH 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 WOAH and the WTO in the TBT Committee, comparable to the role of WOAH in the SPS Committee.\(^{136}\) This would make WOAH 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 WOAH 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 welfare\(^{139}\) 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 Korea\(^{140}\) and Vietnam.\(^{141}\) The FTAs that the United Kingdom (UK) concluded with

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\(^{132}\) TBT Agreement, supra note 116, Art. 2.5.

\(^{133}\) Ibid., Annex 1.4.


\(^{135}\) While the TBT Agreement does not expressly refer to WOAH 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.eesas.europa.eu/node/54593_en](https://www.eesas.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.
Australia and New Zealand 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'.

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 ducks as well as for pigs, which incorporate WOAH 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 WOAH 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. 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. This note, developed in cooperation with WOAH, 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

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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.


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

147 See section 2.

negatively impact on consumer preferences and, thus, on investments.\textsuperscript{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.\textsuperscript{150} These examples demonstrate how alliances between WOAH 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 WOAH brings normative guidance that supports their agendas; from the perspective of WOAH, these institutions bring new capabilities as WOAH 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 production\textsuperscript{151} have not been supportive of binding, detailed regulations,\textsuperscript{152} some corporations have embraced standards that are aligned with the WOAH standards\textsuperscript{153} and, thereby, contribute to the development and application of international animal welfare standards.\textsuperscript{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 WOAH.\textsuperscript{155} WOAH has recognized the


\textsuperscript{150} European Bank for Reconstruction and Development, Environmental and Social Policy (2019).

\textsuperscript{151} See the references in section 2.


benefits of cooperation with private actors, which can support the operational implementation of the TAHC. A key path is WOAH’s cooperation with the International Organization for Standardization (ISO). WOAH brings to the ISO’s normative guidance a basis for ISO standards, and the ISO brings to WOAH an entry to implementation of the TAHC in the corporate sector. Based on a 2011 agreement, the ISO adopted animal welfare standards that incorporate elements of the TAHC and that allow businesses in the food supply chain to demonstrate their commitment to animal welfare to consumers and investors. 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.

To strengthen adherence by corporate actors to the TAHC, WOAH 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 Welfare to support the coalition in its efforts to support ‘implementation, enforcement and promotion of WOAH animal welfare standards’. For such NGOs, an alliance with WOAH brings the authority of an international institution with state membership and expertise; for WOAH, such alliances bring access to information on corporate practices and, potentially, additional incentives to bring corporate practices in line with the TAHC.

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
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 WOAH 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’. 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.

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. However, in some cases, the interests of global health may run parallel to the animal welfare agenda. 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. Whether the global health agenda will benefit animal welfare depends on an assessment of the specific interests


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.\(^\text{169}\) 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 diseases\(^\text{170}\) and, indeed, for pandemics.\(^\text{171}\) Drivers are the increased scale of disease impact, the immunosuppression of intensively farmed animals and the risks associated with transportation.\(^\text{172}\) The One Health Strategy, adopted in 2022 by the WHO, WOAH, the FAO and UNEP, expressly identifies regulation of farming as a risk mitigation measure for pandemics.\(^\text{173}\)

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.\(^\text{174}\) 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 WOAH, the FAO and UNEP.\(^\text{175}\) 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

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\(^{171}\) 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.


\(^{174}\) 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.

are intertwined and need to be addressed in a coordinated manner. 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’.

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’. 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, 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, 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. 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.

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 WOAH) that adds one further leg to the already complex institutional setting for addressing

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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.
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).
181 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. The interests of animal welfare would be represented as the WHO, in cooperation with WOAH, the FAO and UNEP, is to provide coordination with the competent international organizations. 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. This practice contributes both to animal suffering and to the risks for human health in the form of AMR. In recent years, concerns over the impact of AMR on human health have led the WHO to collaborate with WOAH, the FAO and UNEP in the so-called Quadripartite to curtail the use of antibiotics in livestock farming. 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.

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 WOAH to reduce the use of antimicrobials when not needed for the treatment of the diseases of individual animals, the WHO’s List of

183 Ibid.
184 Ibid.
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,\textsuperscript{190} the WHO Guidelines on Antimicrobials,\textsuperscript{191} the Codex Alimentarius Code of Practice to Minimize and Contain Antimicrobial Resistance\textsuperscript{192} and the TAHC standards for use of antibiotics for animals,\textsuperscript{193} including the principle of responsible and prudent use.\textsuperscript{194} There is some evidence that international policies on AMR, based on these documents, have had an impact. WOAH 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.\textsuperscript{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 WOAH strategies.\textsuperscript{196} At the global level, states so far have shown little appetite for binding obligations on the topic;\textsuperscript{197} even a voluntary code that WOAH, the WHO and the FAO envisaged in 2018 has not been adopted.\textsuperscript{198} So far, states have favoured the liberty of production and the access to cheap meat over agricultural and antibiotic reform.\textsuperscript{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 WOAH and UNEP. The Quadripartite, little known to international lawyers, presents a forum for cooperation by the epistemic communities of the four institutions.\textsuperscript{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

\textsuperscript{190} WHO, Critically Important Antimicrobials for Human Medicine, 6th rev. (2019), available at www.who.int/publications/i/item/9789241515528.
\textsuperscript{193} TAHC, \textit{supra} note 22, para. 6.10.2.
\textsuperscript{194} WOAH, List of Antimicrobial Agents of Veterinary Importance, Resolution no. XXVIII (2007).
\textsuperscript{199} Kirchhelle, \textit{supra} note 185.
\textsuperscript{200} IACG on Antimicrobial Resistance, \textit{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. 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. 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, 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, including climate change, air pollution, the pollution of freshwater and coastal areas and the loss of biodiversity. 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) emissions – in particular, those resulting from land use change for feed production, animal production, manure and processing and transport. 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.
203 Kamenshchikova et al., supra note 178.
207 Rojas-Downing et al., supra note 206.
meat production and to change diets to more nutritious feed\textsuperscript{208} could lead to both a reduction of GHG emissions and the improvement of animal welfare (although they may result in different environmental problems).\textsuperscript{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.\textsuperscript{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 WOAH to the table, but its role in relation to climate change is different from its role in relation to pandemics and AMR. Although WOAH has addressed the effects of climate change on animals,\textsuperscript{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 WOAH.

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 jurisdiction\textsuperscript{212} certainly applies to activities that contribute to climate change.\textsuperscript{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.\textsuperscript{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.\textsuperscript{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 fulfill 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

\begin{itemize}
  \item \textsuperscript{208} For overview of measures, see \textit{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.
  \item \textsuperscript{209} UN Environment Assembly, \textit{supra} note 175 (acknowledging ‘that animal welfare can contribute to addressing environmental challenges’).
  \item \textsuperscript{210} United Nations Framework Convention on Climate Change (UNFCCC), 1992, 1771 UNTS 107, at 165.
  \item \textsuperscript{212} \textit{Nuclear Weapons in Armed Conflict}, \textit{supra} note 73.
  \item \textsuperscript{213} B. Mayer and A. Zahar, \textit{Debating Climate Law} (2021), at 15.
  \item \textsuperscript{214} Paris Agreement on Climate Change, UN Doc. FCCC/CP/2015/L.9/Rev.1, 12 December 2015, Art. 2(1) (a).
  \item \textsuperscript{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, \textit{supra} note 206.
\end{itemize}
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

220 European Commission, supra note 100.
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. In addition, measures to address nitrogen pollution such as breeding and feeding management may have a positive impact on animal welfare.

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) 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.

The parties to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention) have called for the reduction of the input of nutrients from agriculture. The FAO has developed a programme to compile information on livestock and the environment and has set up a Livestock Environmental Assessment and Performance Partnership, in which WOAH will participate. The most comprehensive agenda is driven by the UNEP Assembly, which in 2019 set up an intergovernmental mechanism for the coordination of nitrogen policies.

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, and the process is now geared to setting up a mechanism for inter-convention nitrogen coordination among various relevant instruments, including the CBD, the UNFCCC, the Convention on Long-Range Transboundary Air Pollution and the Global Programme for Action on the Protection of the Marine Environment from Land-based Activities so as to enhance

234 CBD, supra note 225.
235 UNFCCC, supra note 210.
the consistency of actions taken by member states. 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. 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 WOAH standards and the various initiatives relating to global health, climate change and biodiversity, remain well below the radar of international law. 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

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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 WOAH 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, WOAH 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.\footnote{Gibson, ‘The Universal Declaration of Animal Welfare’, 16 Deakin Law Review (2011) 539.} Such a document would consolidate what has been achieved so far and provide the basis for the further development of international law.