

From Local to Global: A Comparative Study of Animal Law Protections in International Disasters Around the World

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Abstract

The ever-increasing global animal death rate in disasters is a product of our anthropocentric bias. The disasters, unfortunately, do not discriminate and devastate both human and animal life, further exacerbating climate change. Institutions such as factory farming are major drivers of such disasters and as a result, we need an immediate inclusion of an animal disaster protection framework in International and national disaster laws as a mechanism to prevent disasters and ensure human and animal safety.

Keywords

Animal Disaster Protection Framework; Disaster Risk Reduction; UNDRR Sendai Framework; One Health; Anthropocentric bias

'WHAT was our share in the sinning,
That we must share the doom? [...]
What had we done, our Masters,
That you sold us onto Hell'

– Katherine Lee Bates¹

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¹ Katherine Lee Bates, *The Horses* <<https://www.poetry.com/poem/24904/the-horses>> accessed 20 October 2023.

1. Animals in Disasters: An Introduction

With over 69% of biodiversity loss reported from 1968–2018, followed by over 25 water-related disasters in the US alone post-2018, the combined number of animal deaths in Hurricane Michael and Florence (both occurring in 2018) was 5.5 million, out of which 3.4 million were chickens and 5500 pigs, many of which drowned and caused the CAFO manure pits to overflow and pollute waterways.² However, the animal death toll is a global phenomenon. For example, the ongoing Kenyan drought since 2016 has led to the deaths of several animals.³ Kenya wildlife officials found the drought has killed 512 wildebeest, 381 zebras, 205 elephants, 49 Grevy's zebras, 51 buffalo, 12 giraffes, eight reticulated animals, and four Massai animals. Similarly, in Pakistan, the 2022 floods, which had drowned 1/3rd of the country at one point, led to the deaths of over 1.164 million animals. Pakistan, like Kenya, also faces yearly droughts, and countless animals die annually.⁴ 2021 Following British Columbia's flooding and mudslides caused by excessive rain, about 700,000 animals perished in Canada (BC). According to the BC Ministry of Agriculture, 420 dairy cows, 12,000 piglets, and 628,000 birds have died. A further 110 beehives were destroyed, resulting in three million bee deaths.⁵ On the legal end, we need an international animal protection instrument that may act as an adaptation measure to advocate for local and global animal protection during disasters. What that measure looks like can be informed by comparative legal analysis of animal protection laws in Natural Disasters across the globe.⁶

The United Nations Office for Disaster Risk Reduction (UNDRR) estimates that by 2030, with current climate projections, the world will face around 560 disasters per year and an additional 37.6 million people living in conditions of extreme poverty as a result.⁷ No numbers on the loss of animal life have been predicted, but extrapolating from the 3 billion loss

² See Rosamunde Almond and others (eds), *Living Planet Report 2022 – Building a Nature-positive Society* (WWF, 2022) <https://wwfint.awsassets.panda.org/downloads/embargo_13_10_2022_lpr_2022_full_report_single_page_1.pdf> accessed 15 March 2024; Animal Welfare Institute, 'In Natural Disasters, Farm Animals Forsaken' (2018) <<https://awionline.org/awi-quarterly/winter-2018/natural-disasters-farm-animals-forsaken>> accessed 15 March 2024; Water Resources Mission Area, 'Historical Flooding' (28 February 2019) <<https://www.usgs.gov/mission-areas/water-resources/science/historical-flooding>> accessed 15 March 2024.

³ See ABC NEWS, *Kenyan Drought Leads to Mass Animal Deaths as Compensation for Climate-related Losses Becomes a COP27 Topic* (4 November 2022) <<https://www.abc.net.au/news/2022-11-05/hundreds-of-elephants-animals-die-in-kenya-drought/101619978>> accessed 15 March 2024.

⁴ See Khalid Rahim, 'Brief History of Disasters and Its Management in Pakistan' (*Hilal*, October 2019) <<https://learn.realty360view.com/view-article.php?i=3940>> accessed 15 March 2024; CDP, '2022 Pakistan Floods' (*Disaster Philanthropy*, 6 September 2023) <<https://disasterphilanthropy.org/disasters/2022-pakistan-floods/>> accessed 15 March 2024.

⁵ See Jemima Webber, '700,000 Farm Animals Die in British Columbia Floods, Death Toll Expected to Rise' (*Plant Based News*, 6 December 2021) <<https://plantbasednews.org/news/environment/farm-animals-die-british-columbia-floods/>> accessed 15 March 2024.

⁶ See *Text – S.4205 – 117th Congress (2021–2022): Paw Act* <<https://www.congress.gov/bill/117th-congress/senate-bill/4205/text>> accessed 15 March 2024; *H.R.1442 – Prepared Act 117th Congress (2021–2022)* <<https://www.congress.gov/bill/117th-congress/house-bill/1442?r=108>> accessed 15 March 2024; *S.5138 – 117th Congress (2021–2022): Industrial Agriculture* <<https://www.congress.gov/bill/117th-congress/senate-bill/5138?s=1&r=22>> accessed 15 March 2024.

⁷ The United Nations Office for Disaster Risk Reduction, (LinkedIn, 14 October 2023) <https://www.linkedin.com/posts/undrr_breakthecycle-drrday-activity-7118581838100484097-pFiK?utm_source=share&utm_medium=member_desktop> accessed 15 March 2024.

in the 2019 Australian Bushfires, 17 million in the 2020 Amazon fires, and 1 million in the 2022 Pakistan Floods, the deaths will be in the billions.⁸

UNDRR is chiefly responsible for increasing disaster resilience and decreasing vulnerability, thereby employing a disaster prevention approach to reduce disaster occurrence versus disaster response during disasters.⁹ A linguistic analysis of these terms posits a grim picture of non-human animals. Similarly, the policy goal of the UNDRR under the UN Sendai Framework on Disaster Risk Reduction¹⁰ seeks '[t]he substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries'.¹¹

Disasters or Hazards in UN Terminology is defined as 'a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. Hazards can include latent conditions that may represent future threats and can have different origins: natural (geological, hydrometeorological and biological) or induced by human processes (environmental degradation and technological hazards)'.¹² Resilience is defined as follows: '[t]he ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions'. Lastly, vulnerability is defined as: '[t]he conditions determined by physical, social, economic and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards'.¹³

On a closer look, we see that non-human animals are not mentioned in any of these definitions. Instead, we see that non-human animals are mentioned as livelihoods and assets of persons in the policy goal and as property in the definition of hazards. Designating animals as livelihood or property pillages them into a hierarchal association, thereby enforcing anthropocentrism. Similarly, resilience doesn't mention animals as property but as a community. The term community, however, is also highly anthropocentric, as a society of humans is usually defined as a community.¹⁴

Creating a hierarchal relationship with non-human animals has a blinding effect while we develop policies for disaster prevention. For example, as the world moves toward designating fish as sentient, thereby slightly elevating their status in this human-animal relationship, the anthropocentric bias makes disaster prevention impossible. Humans do not live underwater and have no connection to underwater life, so the harm between water-related tourism and aquaculture is not studied from a disaster prevention perspective. Reports suggest sea

⁸ See Altamush Saeed, 'From the United States to Pakistan: Can Climate Change Pave the Way for an International Right to Animal Rescue in Disasters?' (2023) 29(2) *Animal Law Review* 193.

⁹ See the UNDRR's website: <<https://www.undrr.org/>> accessed 15 March 2024.

¹⁰ See UNDRR, 'Implementing the Sendai Framework' (5 April 2023) <<https://www.undrr.org/implementing-sendai-framework>> accessed 15 March 2024.

¹¹ UNDRR, 'What is the Sendai Framework for Disaster Risk Reduction' (4 April 2023) <<https://www.undrr.org/implementing-sendai-framework/what-sendai-framework>> accessed 15 March 2024.

¹² *ibid.*

¹³ *ibid.*

¹⁴ *Dictionary*, 'Community Definition & Meaning' <<https://www.dictionary.com/browse/community>> accessed 15 March 2024.

corals are bleaching and dying out, and we are losing much biodiversity, many of which may go extinct.

With over 69% of biodiversity loss reported from 1968–2018, followed by over 25 water-related disasters in the US alone post-2018, resulting in the death of at least 9 million farmed animals, any more biodiversity loss can exponentially increase the risk of disasters. Therefore, the skewing of biodiversity loss and the failure to acknowledge the vulnerability risk has risen exponentially.¹⁵

The goal of the UN Sendai Framework is disaster prevention, and an anthropocentric approach instead increases the risk of more disasters. Therefore, anthropocentrism can be very much incompatible with disaster prevention. Anthropocentrism is deeply entrenched in the currently existing disaster protection matrix. This paper aims to offer a complete picture of the existing matrix. Based on such findings, one can make recommendations for local (domestic) and global (international) solutions with a view to creating an animal-specific disaster protection matrix.

1.1. The Global Framework for Animal Protection in Disasters

Disaster Risk Reduction has existed globally for the last forty years. It began in 1980 when the United Nations General Assembly declared the 1990s the 'International Decade for Natural Disaster Reduction'. There have been three global World Conferences on Natural Disaster Reduction to date. The first global conference, which took place in 1994, adopted the World's 1st non-binding framework on Disaster Reduction, titled 'The Yokohama Strategy and Plan of Action for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness, and Mitigation'. In 1999, UNDRR also adopted the International Strategy for Disaster Reduction.¹⁶

The Yokohama framework was followed by the Hyogo Framework for Action 2005–15: Building the Resilience of Nations and Communities to Disasters ('HFA'), another non-binding global guiding document from 2005–15. The Hyogo framework was superseded by the currently in-force non-binding global framework called the Sendai Framework for Disaster Risk Reduction 2015–30 ('SFDRR'). The Sendai framework was developed based on key learnings from the 30-year history of disaster risk reduction. In terms of quantitative effect, scope, inclusiveness, and recognition of an all-state responsibility for disaster risk reduction, the Sendai framework goes a giant leap from the Hyogo framework. In addition to an all-state international approach, four priorities have been drafted as a guideline for domestic implementation.¹⁷

To attain the goal of disaster risk reduction and anthropocentric protection of animals as property or livelihood, the Sendai Framework posits the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political, and institutional measures that prevent and reduce hazard exposure

¹⁵ See Almond and others (n 1).

¹⁶ See UNDRR (n 11).

¹⁷ See *ibid.*

and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

The Sendai Framework is also highly prescriptive and lays out provisions for conduct and outcome-oriented seven global targets. These include substantially reducing global disaster mortality by 2030, aiming to lower the average per 100,000 global mortality rate; reducing direct disaster economic loss about global gross domestic product (GDP); reducing disaster damage to critical infrastructure and disruption of essential services, among them health and educational facilities, including through developing their resilience; increase the number of countries with national and local disaster risk reduction strategies by 2020; enhance international cooperation to developing countries through adequate and sustainable support to complement their federal actions for implementation of the present Framework by 2030 and increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030 compared to the period 2005–15 under the Hyogo framework.¹⁸

Subsumed alongside these targets, the Sendai Framework has created four priorities for states at the local, national, regional, and global levels. In chronological order, these priorities are understanding disaster risk, strengthening disaster risk governance to manage disaster risk, investing in disaster risk reduction for resilience and enhancing disaster preparedness for effective response, and ‘Build Back Better’ in recovery, rehabilitation, and reconstruction.¹⁹

The chronological order of priorities logically highlights more emphasis on reducing disaster risk versus mainly focusing on post-disaster recovery, rehabilitation, and reconstruction. However, the exclusion of animals firstly decreases resilience, increases vulnerability, and the impact of disasters. Factory Farming or Concentrated Animal Feeding Operations (CAFOs) are disaster factories. Meat consumption alone is responsible for 47 percent of the global Carbon Dioxide emissions, and factory farms are responsible for 7% of Global Warming. Methane represents just 3 percent of anthropogenic Greenhouse gas emissions but contributes 23 percent to the rise in temperatures due to its higher global warming potential. Thirty percent of such methane emissions come from livestock farming. The food production system, such as farming machinery, fertilizer spraying, and product transportation, causes 17.3 billion metric tons of greenhouse gases annually, representing 35 percent of all global emissions.²⁰ Regarding resources, factory farming from 1990–2020 has resulted in a net loss of 178 million hectares of international forest area and has used 1/4th of global water for feeding animals. Researchers predict a net loss of 17000 non-human animal species by 2050 due to habitat loss and the development of anti-microbial resistance, further fueling biodiversity loss and increasing disaster risk.²¹

¹⁸ See *ibid.* See also Ashleigh Best, ‘The Legal Status of Animals: A Source of Their Disaster Vulnerability’ (2021) 36(3) *Australian Journal of Emergency Management* 63.

¹⁹ UNDRR (n 11).

²⁰ See Oliver Milman, ‘Meat Accounts for Nearly 60% of All Greenhouse Gases From Food Production, Study Finds’ (*The Guardian*, 13 September 2021) <<https://www.theguardian.com/environment/2021/sep/13/meat-greenhouses-gases-food-production-study>> accessed 15 March 2024.

²¹ See New Roots Institute, ‘Factory Farming and the Environment: 11 Facts and Statistics’ (18 January 2022) <<https://www.newrootsinstitute.org/articles/factory-farming-and-the-environment-11-facts-and-statistics>> accessed 15 March 2024.

Manure runoff from such farms contains nitrates and phosphates, which can cause development deficiencies amongst children and lead to algae blooms, ocean acidification, and eutrophication, thereby increasing disaster risk underwater and above the land. The exponential rise of aquaculture puts tremendous pressure on the aquatic environment, causing nutrient accumulation.²² Studies have been conducted on the volume of organic matter, nitrogen, and phosphorus released into the atmosphere by shrimp farms. The estimated amounts of organic matter were 5.5 million tons, 360,000 tons of nitrogen, and 125,000 tons of phosphorus.²³ Underwater deforestation or destruction of Mangrove forests, which are nature's flood and tsunami prevention mechanisms, are lost.²⁴ In Thailand, where the area covered by mangrove forests has more than halved between 1961 and 1996, this is primarily due to conversion to shrimp farms.²⁵ The Mangroves are also habitats to many species, increasing the risk of biodiversity loss and thereby increasing disaster risk.

1.2. Painting the Complete Disaster Risk Reduction Framework: Other International Frameworks Linked to Disasters

The recent UN Resolutions on the Right to a Healthy Environment and the UN Resolution on One Health are critical examples of instruments intended to reduce disaster risk. They are, therefore, part of the international disaster risk reduction framework.²⁶ As the right to a healthy environment is inconceivable without a right to an environment for non-human animals to prevent zoonosis and other issues of concern, it can be indirectly stated that this resolution also extends to non-human animals.²⁷

The United Nations Environment Assembly resolution adopted on 2 March 2022 in Kenya over the philosophical collision of non-human animal, human, and environmental welfare can be a crucial component in the reduction of disaster risk.²⁸ This resolution states:

'Acknowledging that animal welfare can contribute to addressing environmental challenges, promoting the "One Health" approach, and achieving the Sustainable Development Goals [...] Requests the Executive Director of the United Nations Environment Programme, [...] to produce a report, in close collaboration with the Food and Agriculture Organization of the United Nations, the World Health Organization and the World Organization for Animal Health, as well as with the One Health High-Level Expert Panel, on the nexus between animal welfare, the environment, and sustainable development by analyzing the nexus between animal welfare, the environment, and sustainable development'.²⁹

²² See *ibid.*

²³ See Aleksandra Drizo and Muhammad Omar Shaikh, 'An Assessment of Approaches and Techniques for Estimating Water Pollution Releases from Aquaculture Production Facilities' (2023) 196 *Marine Pollution Bulletin* <<https://www.sciencedirect.com/journal/marine-pollution-bulletin/vol/196/suppl/C>> accessed 15 March 2024.

²⁴ See 'NASA Study Maps the Roots of Global Mangrove Loss – Climate Change: Vital Signs of the Planet' (NASA, 18 August 2020) <<https://climate.nasa.gov/news/3009/nasa-study-maps-the-roots-of-global-mangrove-loss/>> accessed 15 March 2024.

²⁵ See 'Thailand Celebrates Its First National Mangrove Forest Day' (*IUCN*, 27 June 2022) <<https://www.iucn.org/thailand/202005/thailand-celebrates-its-first-national-mangrove-forest-day>> accessed 15 March 2024.

²⁶ See UNHCR Res 48/13 (8 October 2021).

²⁷ See *ibid.*

²⁸ See UNEA Res 5/2, UN Doc EA5/L 10/Rev 1 (2 March 2022).

²⁹ *ibid.*

While it is too soon to comment on what the UNEA report will produce, we can safely say that given the ongoing climate crisis, which does not discriminate on impact, One Health is as significant as the Big Bang for disaster risk reduction.³⁰

The final moving piece of the disaster framework often not connected with disaster risk prevention is the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, and the Sustainable Development Goals.³¹

All three of these frameworks intend to reduce the effects of climate change and, therefore, effectively reduce disaster risk. The Sixth assessment report of the Intergovernmental Panel on Climate Change (IPCC) affirmatively declared that the warming of the climate system is unequivocal.³² Since the 1950s, many observed changes have been unprecedented over decades to millennia. Human influence is the leading cause of such change. The IPCC sheds light on how we are reaching tipping points through the loss of carbon sinks via deforestation and destruction of Mangrove forests, the unprecedented sea level and temperature rise, and reported hot extremes worldwide. These events are unfortunate examples of unprecedented disaster risk in our current anthropocentric policies. Regarding net anthropogenic greenhouse gas emissions, the IPCC reports affirm the average greenhouse gas emissions during 2010-2019 were higher than in any previous decade.³³

The UN SDG Goals 13, 14, and 15 on Climate Action and Life on Land and Water are inextricably linked to SDG Goals 1 and 2 on eradication of poverty and zero hunger because of the extremely high external costs of the failure to include an eco-centric and animal-centric approach to disaster risk reduction planning. The International Energy Agency (IEA) found that reducing Carbon dioxide equivalent emissions by 50 percent by 2050 would translate into energy-spending of \$316 trillion or (\$46 trillion) more than a business-as-usual disaster prevention scenario.³⁴ According to the IEA, these reductions will require investments to reach approximately \$750 billion per year by 2030 and rise to over \$1.6 trillion per year from 2030 to 2050, a cost developing nations suffering from poverty or hunger cannot bear to pay.³⁵ Unfortunately, the costs of doing nothing are important as well.

In 2007, Wayne Hsu and Cass Sunstein conservatively estimated that the lost value of animal extinctions because of climate change ranged between \$0.5 to \$1.3 trillion worldwide and \$58 to \$144 billion in the United States.³⁶ Similarly, a 2012 Canadian study estimated climate change costs for Canada between \$5 billion per year to \$21 and \$43 billion

³⁰ See Ed King, 'Climate Change: The New Big Bang?' (*Climate Home News*, 1 September 2012) <<https://www.climatechangenews.com/2012/01/09/climate-change-the-new-big-bang/>> accessed 15 March 2024.

³¹ See United Nations Framework Convention on Climate Change (UNFCCC), May 9, 1992, S Treaty Doc no 102-38 (1992), 1771 UNTS 107, 'The 17 Goals | Sustainable Development' (*UN*) <<https://sdgs.un.org/goals>> accessed 15 March 2024.

³² See Core Writing Team, Hoesung Lee and José Romero (eds), *IPCC, 2023: Summary for Policymakers in Climate Change 2023: Synthesis Report* (IPCC 2023) 1-34 <https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_SPM.pdf> accessed 15 March 2024.

³³ See IPCC, 'The Evidence Is Clear: The Time for Action Is Now. We Can Halve Emissions by 2030' (4 April 2022) <<https://www.ipcc.ch/2022/04/04/ipcc-ar6-wgiii-pressrelease/>> accessed 15 March 2024.

³⁴ See IEA, 'Net Zero by 2050 – Analysis' (May 2021) <<https://www.iea.org/reports/net-zero-by-2050>> accessed 15 March 2024.

³⁵ See *ibid.*

³⁶ See Wayne Husing and Cass R Sunstein, 'Climate Change and Animals', (2007) 155 *University of Pennsylvania Law Review* 1695, 1740.

by the 2050s.³⁷ Moreover, a recent 2021 Carbon Disclosure Project report projected a revenue loss of \$1.26 trillion for global supply chains in the next five years due to climate change, deforestation, and water insecurity, all of which are caused by a failure to incorporate animal welfare in planning projects and thereby reduce disaster risk.³⁸

Lastly, the Paris Agreement goal of holding the increase in global average temperature to well below 2 degrees Celsius above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change, under the UNFCCC, is impossible to achieve without a recognition of animal rights under the current disaster risk reduction framework.³⁹

Therefore, it can be decidedly said that under the current global/international disaster risk reduction framework, only if we illustrate the complete global disaster risk reduction framework, the protection of Animal Rights is directly linked to the human right of protection in disasters and preventing future disasters effectively. However, given the UNDRR Sendai Framework language is highly anthropocentric, the effective implementation of such a qualified statement is in peril. Practical examples of such a difficult situation are more evident in local/domestic disaster risk reduction frameworks.

2. The Animal Disaster Protection Framework Tool

Our current evaluation of disaster frameworks is inevitably incomplete because we do not have objective matrices or indicators when determining disaster risk. The two fundamental values we may use in developing such a matrix are values that either increase or decrease disaster risk and values that affect the framework's implementation. Values increasing or decreasing disaster risk are similar to the global framework's lack of animal rights presence in developing projects such as factory farming or aquaculture and are much more straightforward to acknowledge.

Values that affect the framework's implementation are not that clear. To keep such values objective, these can be framed as the following questions, which are illustrated through a case study of US and Pakistan.

2.1. USA

2.1.1. The Why Behind Animal Protection Measures?

The US is famous for developing the world's 1st law on Animal Protection in Disasters – the Pets Evacuation and Transport Standards Act 2006 Pub. L. no 109–308, 120 Stat 1725

³⁷ See National Roundtable on the Environment and the Economy, 'Paying the Price: The Economic Impacts of Climate Change for Canada' (2012) <<http://nrt-trn.ca/climate/climate-prosperity/the-economic-impacts-of-climate-change-for-canada/paying-the-price>> accessed 15 March 2024.

³⁸ See Rose Celestin, 'Climate Change Will Cost Companies \$1.3 Trillion by 2026' (*Forbes*, 20 March 2021) <<https://www.forbes.com/sites/rosecelestin/2021/03/05/climate-change-will-cost-companies-13-trillion-by-2026/?sh=1460d6f16cdc>> accessed 15 March 2024.

³⁹ See *ibid*.

(2006) was passed by the US Congress after the impact of Hurricane Katrina in 2006.⁴⁰ When Katrina hit, only humans were allowed on evacuation transport, not companion animals.⁴¹ As many as 600,000 animals were abandoned or stranded, needing rescue.⁴² Unfortunately, help took too long, and over 250,000 of those animals died.⁴³ Amid the chaos, something extraordinary happened. Some people decided not to leave their companion animals behind, choosing to forgo evacuation or rescue efforts that would have separated them.⁴⁴ The government was either ‘unwillin[g] or [u]nab[le]’ to provide aid for companion animals during the emergency.⁴⁵

The PETS Act requires state and local authorities to consider service animals in their emergency plans and then submit these plans for the Federal Emergency Management Agency (FEMA) approval.⁴⁶ FEMA then can give funds to support these approved plans, including funding the construction of emergency rescue shelters and the availability of rescue and care for service animals during and following a disaster. It also grants FEMA the authority to direct funds for constructing emergency rescue shelters and providing rescue, care, and protection to animals during and following a disaster.⁴⁷

This extraordinary happening can be attributed to the human-animal bond, and companion animals can benefit from it in disaster contexts.⁴⁸ Steve Glassey identifies the lack of human-animal bonds as a reason for failing to protect farmed animals in disasters. The CAFO or factory farming system has made it impossible for the human-animal bond to develop. Irvine observes that farm animals, unlike companion animals, occupy the animal side of the human-animal bond. Irvine further observes that the human-animal bond creates such dual dichotomies in the treatment of different species of animals. Therefore, farm animals are mostly excluded from disaster planning.⁴⁹ While wild animals often have a limited connection to humans, they are protected as a mechanism for preserving mega-charismatic fauna or preventing biodiversity loss. However, it must be noted that an intense amount of land is deforested for setting up factory farms, which leads to habitat loss, resulting in biodiversity loss.

Irvine also informs that due to the structural inequality in factory farms, i.e., layered hen systems, the inability for methane to leave the premises effectively leads to severe consequences for farmed animals during disasters. In April 2023, a dairy farm in Dimmit, Texas, caught fire and led to the death of 17500 farmed animals. The cause of the fire was linked to a manure vacuum truck malfunction, and the fire quickly spread in the methane-thick air

⁴⁰ See *Cosponsors – HR3858 – 109th Congress (2005–2006): Pets Evacuation and Transportation Standards Act of 2006* <<https://www.congress.gov/bill/109th-congress/house-bill/3858/cosponsors>> accessed 15 March 2024.

⁴¹ See Cynthia F Hodges, ‘Detailed Discussion of State Emergency Planning Laws for Pets and Service Animals’ (*Animal Legal and Historical Centre*, 2011) <<https://www.animallaw.info/article/detailed-discussion-state-emergency-planning-laws-pets>> accessed 15 March 2024.

⁴² See *ibid.*

⁴³ See *ibid.*

⁴⁴ See *ibid.*

⁴⁵ *ibid.*

⁴⁶ See FEMA, ‘Disasters, Glossary of Terms’, SLG 101: Guide for All-Hazard Emergency Operations Planning <<https://www.fema.gov/pdf/plan/glo.pdf>> accessed 15 March 2024.

⁴⁷ 42 USC § 5196 (2021); 42 USC § 5170b.

⁴⁸ See Steve Glassey, ‘Animal Welfare and Disasters’ in William R Thompson (ed), *Oxford Research Encyclopedia of Politics* (OUP 2020).

⁴⁹ See Leslie Irvine, ‘Filling the Ark: Animal Welfare in Disasters’ (Temple University Press 2009).

of the factory farm. Beef cattle produce about 60 kilograms of methane per year. Dairy cattle have about 200 kg of methane per year. All in all, ruminants are believed to produce roughly one-third of all methane gas. Failure to create a passageway for methane to leave the premises primarily caused this fire. According to the Animal Welfare Institute, nearly 6.5 million farm animals have been killed in barn fires since 2013, of which about 6 million were chickens and about 7,300 were cows. Such wildfires can make the habitat uninhabitable for animals and lead to even more biodiversity losses, further increasing disaster risk.⁵⁰

To summarize, the human-animal bond is undoubtedly significant in protecting companion animals because human lives are put at risk during disasters due to their inability to leave.

2.1.2. Pro-animal Protection Measures

Local states eventually developed companion animal catastrophe protection provisions due to the PETS Act. Over thirty states have passed laws or administrative plans addressing animal care in catastrophe situations. These rules address companion animal care, animal response teams, sheltering and identifying rescued animals, and have differing procedural and substantive protections. State laws are further categorized, and some states mandate specific actions in addition to taking animal welfare into account when developing disaster relief plans.⁵¹

In 2022, the US Congress passed the Planning for Animal Wellness (PAW) Act, which acknowledged the deficiencies in the PETS Act and mandated FEMA to create expert working groups to develop animal emergency plans. The act aimed to foster collaborations addressing the needs of household pets and service or captive animals in the event of a disaster and to review best practices and federal guidance for disaster response.⁵²

Another act currently in the US Congress is the Accountability (IAA) Act. The Act was introduced in 2022, during the 117th Congress term, and reintroduced this year in the 118th term. The Act acknowledges a factory farm's structural inequalities and asks for a factory farm moratorium, thereby decreasing exponential disaster risk.

Under the Livestock Indemnification program, farmers and ranchers have received more than \$500 million in compensation since 2008. During natural calamities, farmers are paid to produce limp, dead bodies of cattle, and horrific methods of killing are encouraged. The IAA seeks to undo this benefit and force the losses on the commercial livestock sector. Concentrated animal feeding operations (CAFOs) are large, high-density farms that increase disaster risk by threatening the environment, emit large amounts of methane, and are ideal breeding grounds for zoonotic illnesses. The IAA also intends to end cruel means of death, like sodium nitrate poisoning and ventilation shutdowns, by establishing a new office under the USDA to collect yearly fees from large meat producers to finance humane methods of culling.⁵³

⁵⁰ See Bernd Debusmann Jr, 'Texas Dairy Farm Explosion Kills 18,000 Cows' (*BBC*, 13 April 2023) <<https://www.bbc.com/news/world-us-canada-65258108>> accessed 15 March 2024.

⁵¹ See Saeed (n 8) 204–08.

⁵² See *ibid.*

⁵³ See *ibid.*

Since many animal deaths during disasters occur within CAFOs, the IAA would also mandate factory farms to create emergency plans for natural disasters. A total of 5.5 million animals perished during Hurricanes Michael and Florence, including 5,500 pigs and 3.4 million chickens, which overflowed CAFO dung pits and contaminated rivers. The IAA would establish a connection between workers' and animal rights by requiring the Department of Labor to impose new safeguards for farm workers participating in emergency response and outlawing prison labor in disaster relief efforts. Although a significant step forward, these interventions are local in nature. Therefore, international animal protection action is now more important than ever to avert catastrophes in the future and the spread of zoonotic illnesses like COVID-19.⁵⁴

In October 2023, two remarkable animal disaster risk prevention laws were passed in California, US.⁵⁵ These include laws to expand access to critical veterinary telehealth services (AB 1399) and secure pet-friendly sheltering sites during natural disasters and extreme weather events (AB 781). Many may not know this, but even if we create animal rights to veterinary care during disasters, depending on the kind of disaster, roads may be blocked to veterinary care facilities, resulting in animal suffering. Access to telehealth veterinary care is a remarkable disaster risk reduction initiative for those situations. AB 781 is self-explanatory as it mandates the development of animal shelters alongside human shelters to reduce the risk of humans not being willing to evacuate without their companion animals, again bringing the human-animal bond into play which is significant if employed appropriately in policy development.

2.1.3. Risk-increasing Measures

Risk-increasing measures include the massive livestock subsidies offered to farm animals in case of disasters. These subsidies are essentially an incentive to let the farmed animals die and get later reimbursed from the federal government. Since 2008, over \$500 million has been provided as compensation to farmers and ranchers under the Livestock Indemnification Program.⁵⁶

While these subsidies are contingent on presenting a disaster evacuation plan, such plans only highlight the procedural aspects of evacuation. Their plans do not acknowledge structural design inequalities, such as the one in the factory farm in Dimmit, Texas. As the federal government does not ask factory farm operators to change their actual structures and go from, for example, a layered hen system to a cage-free system to reduce animal disaster risk from earthquakes, such evacuation plans will not appropriately decrease disaster risk.

2.1.4. Status of Animals in the Legal System

Understanding the status of animals in the domestic legal system is significant information in understanding a nation's animal disaster protection framework. Such understanding can

⁵⁴ See *ibid.*

⁵⁵ See Matt Bershader, 'Matt's Blog: California Demonstrates Legislative Leadership on Animal Protection' (ASPCA, 20 October 2023) <<https://www.aspc.org/blog/matts-blog-california-demonstrates-legislative-leadership-animal-protection>> accessed 15 March 2024.

⁵⁶ See Animal Welfare Institute, 'Emergency and Disaster Preparedness for Farm Animals Act' <<https://awionline.org/legislation/emergency-and-disaster-preparedness-farm-animals-act>> accessed 15 March 2024.

later inform effective policies or legislation. While the US acknowledges humans as legal persons, animals are mere property.⁵⁷ Categorizing animals as property has massive ramifications in animal protection in disasters as this status allows them to be kept in ways that maximize their economic value. This status is also a significant cause of structural inequity in factory farms and eventually leads to more animal and biodiversity loss, increasing disaster risk.⁵⁸

Similarly, designating animals as non-sentient furthers the anthropocentric hierarchy in animal disaster risk reduction. Since property and non-sentient status make animals legally inferior, they are afforded a much lower priority in disaster contexts. In Hurricane Katrina, evacuation transport was only available for humans, who could not onboard companion animals. Baum argues that this creates a value disparity, and Potts & Gadenne observe this status can lead to animals being treated as inanimate object-like things.⁵⁹

Even if we create excellent animal disaster protection legislation, its implementation will eventually falter due to the designation of animals as property or non-sentient.

2.1.5. Sentience Status

As of today, no federal legislation exists designating animals as sentient beings. Certain states, including Oregon, have codified animal-sentient provisions.⁶⁰

2.1.6. Property Status

Animals are classified as property.⁶¹

2.1.7. Welfare Protection Status

Very Limited welfare protections, primarily cruelty-based, are triggered in the case of actual animal cruelty. Such laws do not delegate positive legal duties to humans for their non-human animals. The Animal Welfare Act (AWA) delegates only minimum animal protection standards.⁶² A recent development at the Federal level came in the shape of Proposition 12, which was held constitutional by the US Supreme Court in May 2023.⁶³ Proposition 12 aims to decrease the structural inequalities at factory farms by marginally increasing space for farm animals. However, the recently introduced Ending Agricultural Trade Suppression Act (EATS Act) in the US Congress aims to reverse this and exponentially increase disaster

⁵⁷ See Steven M Wise, 'The Legal Thinghood of Nonhuman Animals' (1996) 23 Boston College Environmental Affairs Law Review 471.

⁵⁸ See Best (n 18).

⁵⁹ See Annie Potts and Donelle Gadenne, *Animals in Emergencies* (Canterbury University Press 2014).

⁶⁰ See Grace Hussain, 'What Is a Sentient Being? Definition and Examples of Sentient Beings' (*Sentient Media*, 25 October 2022) <<https://sentientmedia.org/sentient-being/>> accessed 15 March 2024.

⁶¹ See Animal Legal Defense Fund, 'How Animals Differ from Other Types of "Property" Under the Law' (20 November 2020) <<https://aldf.org/article/how-animals-are-treated-differently-from-other-types-of-property-under-the-law/>> accessed 15 March 2024.

⁶² See <<https://www.govinfo.gov/content/pkg/COMPS-10262/pdf/COMPS-10262.pdf>> accessed 15 March 2024.

⁶³ See *National Pork Producers Council et al v Ross, Secretary of the California Department of Food and Agriculture et al*, 598 US 1 (2023) <https://www.supremecourt.gov/opinions/22pdf/21-468_5if6.pdf> accessed 15 March 2024.

risk.⁶⁴ The 28-Hour Law of 1906 mandates animal resting, feeding, and watering every 28 hours during transport. Unhealthy animals are prone to diseases and may increase disaster risk for a zoonotic disaster. However, these are only minimum protections, and the animals are susceptible to death and spreading disease.⁶⁵ Additionally, a group of Animal Rights Experts in the US have formulated a draft for the International Treaty called the Convention on Animal Protection (CAP). CAP acknowledges the public health intersection between humans, animals, and the environment based on the One-Health principle. CAP calls for animal protection to reduce zoonotic disaster risk substantially.⁶⁶

2.1.8. Environmental Protection Status

The Endangered Species Act (ESA) protects endangered or threatened animals.⁶⁷ The ESA mimics the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in terms of its functioning and prohibits animal take.⁶⁸ However, in the recent decision by the US Supreme Court in the Sackett case in May 2023, the application of ESA has been minimal, excluding several wetlands under the US Clean Water Act. Before Sackett, for any federal project completed on wetlands, ESA personnel had to be consulted as a part of the Environmental Impact Assessment and ensure no animal take of ESA-listed animals was happening.⁶⁹

2.1.9. Animal-specific Protections in Domestic Law

Animals in Zoos: Zoos, aquariums, circuses, and animal dealers are subject to the AWA, which governs the housing of mammals on public display. According to the AWA, dealers, and exhibitors of wild animals must obtain a license from a USDA representative and adhere to minimum requirements for nutrition, water, veterinary care, movement, and shelter from severe weather and temperature changes. Additionally, facilities with marine mammals must do weekly water checks, provide species-specific environments to animals, and adhere to minimum requirements like zoos.⁷⁰

⁶⁴ See *HR3183 - EATS Act of 2023 118th Congress (2023–2024)* <<https://www.congress.gov/bill/118th-congress/house-bill/3183/related-bills>> accessed 15 March 2024.

⁶⁵ See Legal Information Institute, 'TOPN: Twenty-Eight Hour Law (Transportation of Animals)' (*Cornell Law School*) <https://www.law.cornell.edu/topn/twenty-eight_hour_law_transportation_of_animals> accessed 15 March 2024.

⁶⁶ See <<https://www.conventiononanimalprotection.org/>> accessed 15 March 2024.

⁶⁷ See US Fish & Wildlife Service, 'Endangered Species Act 50th Anniversary' <<https://fws.gov/esa50>> accessed 15 March 2024.

⁶⁸ See Convention on International Trade in Endangered Species of Wild Fauna and Flora (adopted 3 March 1973, entered into force 1 July 1975) 14537 UNTS 993.

⁶⁹ See *Sackett et Ux v Environmental Protection Agency et al*, 598 US 1 (2023) <https://www.supremecourt.gov/opinions/22pdf/21-454_4g15.pdf> accessed 15 March 2024.

⁷⁰ See World Animal Protection, 'Animal Welfare Matters: See How the US Treats Animals' (10 March 2020) <<https://www.worldanimalprotection.us/news/animal-welfare-matters-animal-protection-index>> accessed 15 March 2024.

2.1.9.1. Farmed Animals⁷¹

For fur farms, the only protection available is under the Truth in Fur Farming Act of 2010, which requires products made by fur to be labeled as such.

AWA exempts farmed animals. Only minimum protections are available under the 28-hour law and the Humane Slaughter Act. Many states have right-to-farm laws, making nuisance laws inapplicable at factory farms, increasing zoonotic disaster risk in less affluent communities near such facilities.⁷²

2.1.9.2. Companion Animals⁷³

AWA also provides similar minimal protections for companion animals, especially dog breeders to zoos.

2.1.9.3. Laboratory Animals

AWA excludes rats and mice bred for research. Animal welfare regulations within the AWA require each institution to establish an Institutional Animal Care and Use Committee (IACUC) to review and approve all uses of animals in research. IACUC is required to investigate complaints and report any noncompliance. Each IACUC must include at least three people – an experienced scientist, a veterinarian, and an individual not affiliated with the institution. IACUC are internal committees at research institutions, making them susceptible to institutional capture.⁷⁴ In early 2023, the Federal Drug Administration Modernization finally made animal experimentation non-mandatory if other alternatives are available.⁷⁵

2.1.9.4. Wild Animals

The Bald and Golden Eagle Protection Act of 1940 makes it illegal to take or possess bald eagles or golden eagles, their eggs or nests, without a permit issued by the Secretary of the Interior.⁷⁶ The Fur Seal Act of 1966 prohibits the taking, including transportation, import, or possession of fur seals and sea otters, except under specified conditions. Exceptions are authorized for 'Indians, Aleuts, and Eskimos' living on the North Pacific Ocean coasts, who can take fur seals and dispose of their skins.⁷⁷ The Wild and Free-Roaming Horses and Burros Act of 1971 protects wild horses living on federally owned public land from cruelty. The Bureau of Land Management manages its regulations.⁷⁸ The Airborne Hunting Act 1971

⁷¹ See Animal Welfare Institute, *Legal Protections for Animals on Farms* (January 2021) <<https://www.awionline.org/sites/default/files/uploads/documents/21LegalProtectionsFarmReport.pdf>> accessed 15 March 2024.

⁷² See Edgar Barrios PA, 'Right-to-Farm in America: Overview and Case Studies' (*State Government Leadership Foundation*, 6 August 2021) <<https://www.sglf.org/blog/right-to-farm-in-america-overview-amp-case-studies>> accessed 15 March 2024.

⁷³ Mentioned extensively under the PETS Act previously.

⁷⁴ See World Animal Protection (n 70).

⁷⁵ See Joe Hernandez, 'The FDA No Longer Requires All Drugs to Be Tested on Animals before Human Trials' (*NPR*, 12 January 2023) <<https://www.npr.org/2023/01/12/1148529799/fda-animal-testing-pharmaceuticals-drug-development>> accessed 15 March 2024.

⁷⁶ See World Animal Protection (n 70).

⁷⁷ *ibid.*

⁷⁸ See *ibid.*

prohibits shooting or attempting to shoot or harassing any bird, fish, or other animals from aircraft except for specific specified reasons, including protection of wildlife, livestock, and human life under a permit or license provided at the federal or state level.⁷⁹ The Marine Mammal Protection Act 1972 (MMPA) establishes a moratorium on the taking and importing marine mammals and products taken from them.⁸⁰

2.1.9.5. Liminal Animals

Liminal animals are mostly excluded from all legislative protections. As liminal animals are mostly considered pests, they are often subject to extermination via poison. This poison eventually, through the food chain, enters humans, increasing zoonotic disaster risk across the food chain.⁸¹

2.1.9.6. Aquatic Animals

No protection exists. However, they should be protected, and more research should be directed towards underwater disaster risk.⁸²

2.1.9.7. Stakeholder Accountability

Under AWA, the Federal United States Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) is responsible for implementing the act. Inspections under the Animal Welfare APHIS Animal Care inspectors conduct routine, unannounced inspections of all entities licensed and registered under the AWA.⁸³ There are three types of reviews: *pre-licensing assessments* to make sure applicants meet federal standards before being licensed/registered; *routine, unannounced compliance inspections* of all entities to make sure they are adhering to national standards and regulations and *focused inspections* based on public complaints or allegations of unlicensed activities. Such reviews are infrequent. In the breeder inspection reports, APHIS documented close to 5,000 infractions between the fiscal years 2014 and 2016. But starting in 2017, there were fewer and fewer recorded breaches; this trend has continued. It is still possible that there is a considerable undercount of actual noncompliance in the number of documented violations. In fiscal year 2022, the USDA recorded over 3,000 breaches at over 13,000 licensed and regulated firms; nevertheless, only five official complaints were made, and just 17 settlements were obtained by the agency during that same year.⁸⁴

Similarly, in February 2017, the USDA removed public access to thousands of reports documenting how many animals are kept by research laboratories, companies, zoos, circuses,

⁷⁹ See *ibid.*

⁸⁰ See *ibid.*

⁸¹ See Picturing Animals in *National Geographic*, 'Liminal Animals' (Michigan State University) <<http://picturing-animals.msu.edu/teaching-modules/liminal-animals/>> accessed 15 March 2024; Lisa Owens Viani, 'Why California's Ban on Retail Sale of Toxic Rat Poisons Isn't Enough' (*Earth Island Journal*, 27 March 2014) <https://earthisland.org/journal/index.php/articles/entry/why_californias_ban_on_retail_sale_of_toxic_rat_poisons_isnt_enough> accessed 15 March 2024.

⁸² See NOAA Fisheries, 'Endangered Species Conservation' <<https://www.fisheries.noaa.gov/topic/endangered-species-conservation>> accessed 15 March 2024.

⁸³ See World Animal Protection (n 70).

⁸⁴ See ASPCA, 'USDA Enforcement: Fiscal Year 2022' <<https://www.aspc.org/improving-laws-animals/public-policy/usda-enforcement-fiscal-year-2022>> accessed 15 March 2024.

and animal transporters and whether those animals are being treated humanely by the AWA.⁸⁵ Objectively speaking, the US is suffering from agricultural exceptionalism, and this has dramatically affected its efficiency in implementing its already weak animal disaster protection laws, thereby further increasing disaster risk.

2.2. Pakistan

The Ministry for National Food Security and Research regulates animal welfare on the federal level. On the Provincial level, each province has its own Livestock & Diaries Department for regulating agricultural animals. Per the Eighteenth (18) Amendment of 2010 of the Constitution of the Islamic Republic of Pakistan, like the tenth amendment of the US Constitution, the Pakistan Constitution (Article 70(4)) contains enumerated subjects in relation to which powers are solely reserved to the provinces.⁸⁶ Therefore, the Federal Republic cannot legislate on matters expressly reserved to the states. Animal Welfare is a state function, and thus, a federal law on animal welfare would be unconstitutional in Pakistan. Therefore, animal welfare laws need to be introduced at the provincial level. However, before the adoption of the Eighteenth Amendment in 2010, the Pakistan Prevention of Animal Cruelty Act 1890 (PCA Act)⁸⁷ was still in force and it did apply across the country. The PCA Act will apply to a particular province until that province drafts its animal cruelty law. Similarly, the Pakistan Halal Authority Act of 2016 (PHA Act)⁸⁸, even though created after the passage of the Eighteenth Amendment, applies across Pakistan as its primary function is the control of trade, foreign commerce, and inter-provincial trade rather than explicitly animal welfare.

2.2.1. The Why Behind Animal Protection Measures

Pakistan, unlike the US, has a weak economic system and is a victim of disasters. However, its massive agricultural footprint makes it more susceptible to disasters. Pakistan is the fourth-highest milk producer globally and the 11th-highest livestock producer worldwide. Pakistan, in FY-2022, produced 65.745 million tonnes of milk, 2.2512 million eggs, 92 million domestic poultry, and 5.219.000 tonnes of meat and exported roughly 116.514 Megaton of seafood.⁸⁹ In 2022, Pakistan suffered a major catastrophe where a flood drowned 1/3rd of the country and killed over 1700 humans and 1.16 million livestock animals. The floods also led to the displacement of over 33 million humans. However, only humans are covered under the National Disaster Management Act of 2010 (NDMA).

Like the Sendai Framework, it defines disasters as ‘a catastrophe or a calamity in an affected area, arising from natural or man-made causes or by accident or fire, bomb blast, terrorist activities, militancy, annoyed or provoked mob1 which results in a substantial loss of life or human suffering or damage to, and destruction of, property both movable and immovable’. As a consequence, Pakistan’s legal system has excluded animals and fatally suffers from

⁸⁵ See *ibid.*

⁸⁶ See Constitution of the Islamic Republic of Pakistan (*CommonLII*) <<http://www.commonlii.org/pk/legis/const/1973/4.html>> accessed 15 March 2024.

⁸⁷ See the Prevention of Cruelty of Animals Act, 1890 (xi of 1890) - Punjab <<https://livestock.punjab.gov.pk/system/files/THE%20PREVENTION%20OF%20CRUELTY%20OF%20ANIMALS%20ACT%2C%201890.pdf>> accessed 15 March 2024.

⁸⁸ See the Pakistan Halal Authority Act 2016 (Act no VIII of 2016) <<http://www.na-sirlawsite.com/laws/phaa2016.htm>> accessed 15 March 2024.

⁸⁹ See Ministry of Finance, Government of Pakistan, ‘Pakistan Economic Survey: 2020–2021’ <https://www.finance.gov.pk/survey_2021.html> accessed 15 March 2024.

anthropocentrism when it comes to the reduction of disaster risk for both humans and animals.

2.2.2. Pro-animal Protection Measures

Pakistan, unfortunately, lacks appropriate animal protection legislation. Among the existing acts nonetheless, one should note the Prevention to Animal Cruelty Act 1890 (PCA Act) and the Provincial Wildlife Protection Acts. There has been a recent change in Pakistan on animal protection due to the 2020 case *Islamabad Wildlife Management Board Through Its Chairman v Metropolitan Corporation Islamabad Through Its Mayor & 4 Others* before the Honorable Islamabad High Court, which declared that non-human animals are rights holders.⁹⁰ A few other lawsuits have followed, furthering the principle that animals are rights holders.⁹¹

Lastly, as animal welfare is a provincial subject, the province of Punjab has recently passed the Humane Dog Birth Control Policy, which aims to end dog culling and strengthen the human-animal bond for companion animals. While the human-animal bond has anthropocentric roots, it can pave the way for disaster protection for companion animals, which can later extend to other animals.

2.2.3. Risk-increasing Measures

Discussing risk-increasing measures is premature until Pakistan decides to include animals in its disaster risk reduction framework.

2.2.4. Status of Animals in the Legal System

Animals are considered non-sentient. However, the PCA act acknowledges animals can feel pain and suffering. Animals are considered property.⁹² Mostly cruelty-based under the PCA Act, provincial wildlife protection acts, and the Pakistan Penal Code.⁹³

2.2.5. Environmental Protection Status

Protections exist under international treaties, including the Convention on Migratory Species of Wild Animals (CMS) and CITES and its implementing legislation, the Pakistan Trade Control of Wild Fauna and Flora Act 2012.

⁹⁰ See *Islamabad Wildlife Management Board Through Its Chairman v Metropolitan Corporation Islamabad Through Its Mayor & 4 Others*, Islamabad High Court, WP No. 1155/2019 (Pak.) (*The Nonhuman Rights Project – Judgment Sheet*) <<https://www.nonhumanrights.org/wp-content/uploads/Islamabad-High-Court-decision-in-Kaavan-case.pdf>> accessed 15 March 2024.

⁹¹ See Hira Jaleel, 'After the Kaavan Decision: A New Wave of Animal Law Litigation in Pakistan' (*International Law News, American Bar Association*, 6 March 2023) <https://www.americanbar.org/groups/international_law/publications/international_law_news/2023/winter/after-kavaan-new-wave-of-animal-law-legislation-in-pakistan/> accessed 15 March 2024.

⁹² See Pakistan Penal Code <<https://pakistancode.gov.pk/pdf/files/administratord5622ea3f15bfa00b17d2cf7770a8434.pdf>> accessed 15 March 2024.

⁹³ See World Animal Protection, 'Animal Protection Index: Pakistan' (10 March 2020) <<https://api.worldanimal-protection.org/country/pakistan>> accessed 15 March 2024.

2.2.6. Animal-specific Protections in Domestic Law

No federal legislative policy for zoos exists. Minimal protections are available under the Punjab Provincial Wildlife Act and its implementation rules on safaris and zoos.

2.2.7. Animals in Captivity

No federal policy for fur animals exists.

2.2.8. Farmed Animals⁹⁴

The Pakistan Prevention of Animal Cruelty Act of 1890 (PCA Act) was initially drafted by the British under colonial rule over the subcontinent.⁹⁵ The PCA Act borrows language from the Royal London Society for Preventing Cruelty to Animals (RSPCA). Interestingly, Henry Bergh of the American Society for Prevention of Cruelty to Animals also borrowed language from RSPCA for drafting the New York Prevention of Cruelty to Animals Act of 1866. Unfortunately, the PCA Act was only amended once in its 130-year history, namely in 2018.

Section 2 of the PCA Act defines animals as domestic or captured animals.⁹⁶ It also defines Phooka or Doom Dev, a practice from the 19th century where farmers used to blow inside a cow's reproductive organs to increase milk production. The method of blowing was inherently cruel and was permanently banned under the Act. Initially, the British promulgated the PCA Act to provide minimum protections for all animals, including farmed animals, and listed specific violations under Sections 3–5.⁹⁷

2.2.8.1. Rearing

For the rearing of animals, the protections are mentioned as follows:

1	Animal	Protection Available
2	Pigs	No protections as the nation has no pig population. ⁹⁸
3	Broiler Chickens	No national policy exists. Punjab has its Poultry Production rules ⁹⁹ which require poultry production facilities to register with Government annually. The only protection available is egg storage room temperature cannot exceed 36 degrees Celsius.
4	Egg-Laying Hens	Same as above.
5	Dairy Cattle & Calves	No National Policy. Section 2 of the PCA Act bans Phooka or Doom Dev
6	Fish	No Policy exists

⁹⁴ As farmed animals are the most susceptible to harm in disasters and are crucial in limiting biodiversity loss and disaster risk, a significant part of the paper focuses on farmed animals.

⁹⁵ See *Jaleel* (n 91).

⁹⁶ See *Prevention of Cruelty to Animals Act* (n 87).

⁹⁷ See *ibid.*

⁹⁸ Pakistan is a Muslim country with 96 percent of its population being Muslims. Muslims are forbidden to eat pork.

⁹⁹ See *Punjab Poultry Production Act 2016* <https://livestock.punjab.gov.pk/system/files/punjab_poultry_production_act_2016_4zaho_0.pdf> accessed 15 March 2024.

2.2.8.2. Transport

Pakistan has no policy or law for the transportation of animals.

2.2.8.3. Slaughter

The Halal Authority Act 2016 applies across the country. It mandates protection (only Halal Animals¹⁰⁰). These protections are mentioned as follows:¹⁰¹

Sr#	Section of HAA Act Schedule 1 ¹⁰²	Protection
1	5.2.1	a) Issuance of a veterinary health certificate prior to slaughter. b) Animal to be healthy and alive at time of slaughter. Animal torture strictly prohibited. (e) Animal having travelled a long distance prior to slaughter to be allowed time to rest.
2	5.2.2	(b) Only licensed halal slaughter to carry on slaughter.
3	5.2.4	(i) Disinfectant and antiseptic fluids to be in compliance with halal provisions.
4	5.2.5	Humane Stunning to be used for calming down an animal. Stunning should not reduce the amount of blood before slaughtering.
5	5.2.6.1.1	(a) A mandatory checkup of farmed animals with a qualified veterinarian. (b) Animals having completed 1/3 of the pregnancy cycle not to be slaughtered.
6	5.2.6.1.2	Only clean animals to be slaughtered. No animals to be slaughter while they are still wet.
7	5.2.6.1.4	Humane methods to be used while moving the animals to the slaughter area by qualified professionals. No animals to see each other during the slaughter process.
8	5.2.6.1.6	Mandatory post-mortem inspection of slaughtered animals.
9	5.2.6.2.1	Poultry arriving at the slaughterhouse to be slaughtered in the shortest time possible.

2.2.9. Pakistan Penal Code 1860¹⁰³

The Pakistan Penal Code (PPC), another colonial relic, offers protections for farm animals, albeit from a loss of property perspective.¹⁰⁴ In the law's eyes, unfortunately, animals are considered property. Therefore, the PPC, under Section 425, considers it an offense of mischief if a person, with the intent or because of negligence, causes destruction or damage to the property of another.¹⁰⁵ In this case, the property can be an animal.¹⁰⁶ Section 426

¹⁰⁰ See Pakistan Halal Authority Act (n 88).

¹⁰¹ See *ibid.*

¹⁰² See *ibid.*

¹⁰³ See Pakistan Penal Code (n 92).

¹⁰⁴ See Animal Legal Defense Fund (n 61).

¹⁰⁵ See Pakistan Penal Code (n 92).

¹⁰⁶ See *ibid.*

provides the penalty under Section 425 to imprisonment, which may extend to three months, with a fine, or both.¹⁰⁷

Sections 427, 428, and 429 further explain instances where the offense of mischief is triggered concerning an animal. While Section 427 stipulates the elements of mischief, Section 428 defines mischief as killing, poisoning, maiming, or rendering useless an animal, and Section 429 applies mischief to farm animals, including bulls, buffalo, etc.

Interestingly, PPC protects companion and farmed animals, provided they hold a meager value of at least PKR 10 (USD 0.035), as mentioned in the abovementioned sections. While it could be considered problematic that PPC does not assign animals a higher financial value, giving a lower value exponentially increases the likelihood of an animal cruelty charge.

2.2.9.1. Companion Animals

No protections exist besides the recently passed Punjab humane dog birth control policy.¹⁰⁸

2.2.9.2. Laboratory Animals

In 2022, under a collaboration with the People for the Ethical Treatment of Animals (PETA), the Islamabad capital territory finally banned experimentation on live animals.¹⁰⁹

2.2.9.3. Wild Animals

Wildlife provincial acts provide minimal cruelty-focused protections that do not create positive obligations.

2.2.9.4. Liminal Animals

No protections exist.

2.2.9.5. Aquatic Animals

No protections exist.

2.2.9.6. Stakeholder Accountability

Most animal welfare protections are cruelty-based, so the police department is responsible for their enforcement. This usually means a civilian must report a crime to initiate the legal process.¹¹⁰ Unfortunately, there is an immense lack of animal welfare consciousness among the police and civilians, leading to no enforcement. This is also why most animal rights

¹⁰⁷ See *ibid.*

¹⁰⁸ See Livestock Punjab, 'Animal Birth Control Policy 2021' <<https://livestock.punjab.gov.pk/>> accessed 15 March 2024.

¹⁰⁹ See Tasgola Burner, 'Huge Win! Pakistan Prime Minister's Office Enacts Historic Animal Testing Reforms, after Peta Plea' (*PETA*, 30 June 2022) <<https://www.peta.org/media/news-releases/huge-win-pakistan-prime-ministers-office-enacts-historic-animal-testing-reforms-after-peta-plea/>> accessed 15 March 2024.

¹¹⁰ See Prevention of Cruelty to Animals Act (n 87).

advocates approach litigation by filing public interest litigation in the courts, hoping for some remedy.

3. Conclusion

Every nation has different legal structures and offers a hierarchal set of protections to various species of animals. Failing to include animals in the disaster framework puts animal lives at risk and substantially increases disaster risk due to biodiversity loss and climate change aggravation. Therefore, the human right to life is deeply connected to the animal right to disaster protection.

To create effective policies that remedy the above, we need an objective animal disaster protection framework tool to help advocates see the complete picture, locally and globally.