

# Any Emergency Assistance for Animal Deaths Caused by Extreme Weather Events Should Be Conditional on Disaster Precautions

Tjitske Dekker

*University of Washington School of Law*

## I. ABSTRACT

The Farm Bill authorizes the Farm Service Agency (FSA) to provide emergency assistance for animal death caused by natural disasters. Payments are made to farmers based on death losses through the Livestock Indemnity Program. There are many other statutory programs in which the government provides assistance to industries after a disaster, and they vary widely in the requirements to be eligible for assistance. But the Livestock Indemnity Program (LIP) places relatively few requirements on farmers to mitigate the risk of animal losses to be eligible for assistance. As climate change and factory farming exacerbate the risk to livestock posed by adverse weather, the government should require common-sense measures to limit animal deaths. Absent this change, the government effectively subsidizes a failure to adapt to new climate norms, exposing itself to greater costs and loss of animal life.

## II. INTRODUCTION

Natural disasters cause billions of dollars in damage every year and destroy businesses and homes.<sup>1</sup> In the aftermath of a disaster, victims' stories and photos of the aftermath tug at our heartstrings.<sup>2</sup> Animals are particularly vulnerable in natural disasters. Factory farms house

---

<sup>1</sup> There were four billion-dollar weather disasters in the United States in August 2020 alone. N.Y. TIMES, WILDFIRE LIVE UPDATES (Sep. 17, 2020), <https://www.nytimes.com/2020/09/17/us/wildfires-live-updates.html?searchResultPosition=2#link-69587b62>.

<sup>2</sup> See, e.g., Campbell Robertson, *Thousands Displaced in Storm-Drenched Louisiana*, N.Y. TIMES (Aug. 14, 2016), <https://www.nytimes.com/2016/08/15/us/louisiana-storm-floods-rescue.html?action=click&module=RelatedCoverage&pgtype=Article&region=Footer> (documenting record 2016 flooding in Louisiana).

thousands of animals in one facility, meaning that a single flood can kill thousands.<sup>3</sup> The government assists farmers to help them protect their businesses by indemnifying them according to their animal losses.<sup>4</sup> But this program does not do enough to protect farmed animals.

The LIP indemnifies farmers for animals lost in a natural disaster. The LIP does not require that farmers take any measures to mitigate loss of animal life. As a result, more animals die from natural disasters than necessary. The program also requires documentation of animal losses, discouraging the practice of opening barn doors to allow abandoned animals a chance to escape.<sup>5</sup> This essay compares the LIP with other statutory indemnity payment programs, both under the jurisdiction of the FSA and in other industries. Indemnity payment programs function much like subsidies and have the power to alter business' behaviors. Some indemnity payment programs require that a recipient show they were not at fault for the qualifying loss, and others exclude high-risk items from indemnification. Such requirements limit the government's exposure to liability and incentivize mitigation of losses.

It is possible to cure the harmful incentives built into the LIP. This essay's focus is on updates to requirements which would mitigate loss of animal life. These changes would have other positive impacts, like reducing recovery costs for farmers after a disaster and reducing the government's costs in providing assistance.

### III. BACKGROUND

---

<sup>3</sup> Alex Cerussi & Irina Anta, *Natural Disasters: Considerations for Animals in Agriculture*, ANIMAL LAW CONFERENCE, ABA (Jan. 29, 2020), [https://www.animallawconference.org/wp-content/uploads/2020/10/Natural-Disasters\\_-\\_Considerations-for-Animals-in-Agriculture.pdf](https://www.animallawconference.org/wp-content/uploads/2020/10/Natural-Disasters_-_Considerations-for-Animals-in-Agriculture.pdf).

<sup>4</sup> See Farm Service Agency, *Disaster Assistance: Livestock Indemnity Program Fact Sheet*, U.S. DEP'T OF AG., available at [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock\\_indemnity\\_program\\_lip-fact\\_sheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock_indemnity_program_lip-fact_sheet.pdf).

<sup>5</sup> Cerussi & Anta, *supra* note 3.

a. DEFINING INDEMNITY

Indemnity programs created by the government act like subsidies. They protect an industry against loss or risk and bolster its resilience. It is important to recognize the LIP as a subsidy because subsidies have the power to shape behavior. Additionally, like a subsidy, the LIP costs the government money, so taxpayers have an interest in the program being designed well.

Indemnity is defined as: “A collateral contract or assurance, by which one person engages to secure another against an anticipated loss or to prevent him from being damnified by the legal consequences of an act or forbearance on the part of one of the parties or of some third person.”<sup>6</sup> Indemnity shifts loss from one party to another.<sup>7</sup> There are two bases for indemnity, contract indemnity and restitution indemnity.<sup>8</sup> Contract indemnity occurs when two parties in a contractual relationship have expressly agreed that one should indemnify the other.<sup>9</sup> Restitution indemnity, also called “common law indemnity,” and “equitable indemnity,” occurs when the law bestows a right upon one party to be indemnified by the other.<sup>10</sup>

More specifically, there are four kinds of indemnity, express agreement, implied agreement, restitution indemnity, and statutory indemnity.<sup>11</sup> Indemnity by express agreement arises simply when parties have agreed to express indemnity provisions in a contract.<sup>12</sup> Indemnity by implied agreement is based on a contract theory that a contract carries an implied agreement by one party to indemnify the other.<sup>13</sup> Restitution indemnity arises most often when

---

<sup>6</sup> *Indemnity*, BLACK’S LAW FREE ONLINE DICTIONARY (<https://thelawdictionary.org/indemnity/>).

<sup>7</sup> See Francis J. Gorman, *Indemnity and Contribution Under Maritime Law*, 55 TUL. L. REV. 1165, 1166 (1981).

<sup>8</sup> See *id.*

<sup>9</sup> See *id.*

<sup>10</sup> See Restatement of Restitution § 86 (1937).

<sup>11</sup> See Gorman, *supra* note 7, at 1170.

<sup>12</sup> See 42 C.J.S. *Indemnity* § 1 (1944).

<sup>13</sup> See Gorman, *supra* note 7, at 1171.

common law entitles a person to indemnity by another. For example, a landowner who is liable to an injured person on their property may be entitled to indemnity from the original tortfeasor.<sup>14</sup>

This paper focuses on the fourth kind of indemnity: statutory indemnity. Statutory indemnity is created by statute where the law authorizes the government to enter indemnity agreements or requires one party to indemnify another.<sup>15</sup> The LIP authorizes the government to indemnify farmers for their livestock losses.<sup>16</sup> The LIP is one of many agricultural assistance programs administered by the FSA.<sup>17</sup> The government runs other similar indemnity programs, such as the Arts and Artifacts Indemnity Program and indemnification of licensees by the Nuclear Regulatory Commission.<sup>18</sup>

The government creates statutory indemnity primarily to assist industries where costs of insurance or losses are high. Through this lens, one may fairly characterize statutory indemnity as a form of subsidy.<sup>19</sup> For example, the Arts and Artifacts Indemnity Program promoted the arts by alleviating the high costs of insuring international art exhibitions.<sup>20</sup> The Price-Anderson Act, which indemnifies nuclear power licensees, was intended to encourage the development of the atomic energy industry.<sup>21</sup> And federal crop insurance programs were established to provide protection for farmers where private insurance companies deemed their insurance “too great a

---

<sup>14</sup> *Id.* at 1172.

<sup>15</sup> *Id.*

<sup>16</sup> See Farm Service Agency, *Disaster Assistance: Livestock Indemnity Program Fact Sheet*, U.S. DEP’T OF AG., available at [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock\\_indemnity\\_program\\_lip-fact\\_sheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdfiles/FactSheets/livestock_indemnity_program_lip-fact_sheet.pdf).

<sup>17</sup> See 7 U.S.C. § 1531.

<sup>18</sup> 20 U.S.C. §§ 971–976 (Arts & Artifacts); 42 U.S.C. § 2210(c) (Nuclear licensees).

<sup>19</sup> For example, indemnity for nuclear accidents has been likened to a subsidization and grouped with other forms of subsidies including tax credits and direct subsidies. Kelsey E. Gagnon, *Atomic Energy and Offshore Wind: The Struggle to Fight Climate Change and the Cost to Be Clean*, 26 OCEAN & COASTAL L. J. 25, 41 (2021) (“One of the most important subsidizations of the nuclear power industry was the Price-Anderson Act . . . which limited a private developer’s liability for public harm caused by nuclear accidents associated with nuclear power generation.”).

<sup>20</sup> Marilyn Phelan, *A Synopsis of the Laws Protecting Our Cultural Heritage*, 28 New Eng. L. Rev. 63, 106 (1993).

<sup>21</sup> 42 U.S.C. § 2012(i); see also *Duke Power Co. v. Carolina Env’tl. Study Group*, 438 U.S. 59 (1978) (upholding constitutionality of the Price-Anderson Act’s limit on liability).

commercial hazard.”<sup>22</sup> The LIP is designed to assist farmers when a natural disaster causes their animals to die.

#### b. FACTORY FARMS AND CURRENT REGULATIONS

Factory farms, also known as concentrated or confined animal feeding operations (CAFOs), refer to large-scale animal agriculture industry.<sup>23</sup> The industry developed to grow a large number of animals as quickly as possible in a confined location.<sup>24</sup> This development has occurred rapidly. Over the course of 14 years, the average number of animals per swine operation increased 2.8 times.<sup>25</sup>

In the Clean Water Act (CWA), Congress required the Environmental Protection Agency (EPA) to regulate CAFOs by designating them point sources from which pollutants may be discharged.<sup>26</sup> The EPA defines CAFOs differently from animal feeding operations (AFOs). The EPA defines AFOs as “a lot or facility . . . where the following conditions are met: (i) Animals . . . have been, are, or will be stabled, or confined and fed or maintained . . . and “[c]rops . . . are not sustained in the normal growing season over any portion of the lot or facility.”<sup>27</sup> The EPA generally designates an AFO as a CAFO if it significantly contributes pollutants to surface waters.<sup>28</sup>

---

<sup>22</sup> *Williamson Farm v. Diversified Crop Ins. Servs.*, 917 F.3d 247, 249 (4th Cir. 2019) (quoting *Fed. Crop Ins. Corp. v. Merrill*, 332 U.S. 380, 383 n.1 (1947)).

<sup>23</sup> Hannah Connor, *Comprehensive Regulatory Review: Concentrated Animal Feeding Operations Under the Clean Water Act from 1972 to the Present*, 12 VT. J. ENVTL. L. 275, 276 (2011).

<sup>24</sup> PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 33, available at [https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content\\_level\\_pages/reports/pcfifapfinalpdf.pdf](https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content_level_pages/reports/pcfifapfinalpdf.pdf)

<sup>25</sup> PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 33, available at [https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content\\_level\\_pages/reports/pcfifapfinalpdf.pdf](https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content_level_pages/reports/pcfifapfinalpdf.pdf).

<sup>26</sup> 33 U.S.C. § 1362(14).

<sup>27</sup> 40 C.F.R. § 122.23(b)(1).

<sup>28</sup> See Emily R. Lyons, Note, *EPA’s Authority Gone Awry: The Flawed CAFO Reporting Rule*, 15 VT. J. ENVTL. L. 599, 603-604 (2014).

Large-scale animal raising facilities expose animals to several risks. Farmed animals are vulnerable to natural disasters and extreme weather events. The vulnerability of farmed animals is demonstrated by the severe flooding in Iowa, Nebraska, South Dakota, and Wisconsin caused by a bomb cyclone in 2019.<sup>29</sup> Historic flooding hit farms hard and sent people and animals alike scrambling for higher ground.<sup>30</sup> State governors declared states of emergency and evacuated residents near rivers.<sup>31</sup> Livestock living in flooded areas were stranded and many animals drowned. In Nebraska, seven hundred pigs drowned on a single farm.<sup>32</sup>

The nature of large-scale farming means that a single adverse weather event can cause thousands of animal deaths. A typical chicken factory farm may have 200,000 birds.<sup>33</sup> In 2000, a tornado killed 500,000 hens in Ohio, and Hurricane Katrina killed three million chickens on a single farm.<sup>34</sup> The double impact of Hurricanes Dennis and Floyd killed 21,000 pigs and one million chickens and turkeys in 1999.<sup>35</sup> Hurricane Florence killed 4.1 million chickens and turkeys and 5,500 pigs in North Carolina.<sup>36</sup> Factory farms impose enormous risk on their resident animals.

---

<sup>29</sup> See All Things Considered, *Nebraska Flooding Threatens Livelihood of Cattle Farmers*, NPR (Mar. 19, 2019), <https://www.npr.org/2019/03/19/704893541/nebraska-flooding-threatens-livelihood-of-cattle-farmers>.

<sup>30</sup> See *id.*

<sup>31</sup> See, e.g., Reece Ristau, *Floodwaters Receding in Nebraska, But Long and Costly Recovery Lies Ahead*, WINSTON-SALEM JOURNAL (Mar. 19, 2019), [https://www.journalnow.com/news/trending/floodwaters-receding-in-nebraska-but-long-and-costly-recovery-lies/article\\_62618653-a5c8-5b4b-91a0-a3bf115afeb5.html](https://www.journalnow.com/news/trending/floodwaters-receding-in-nebraska-but-long-and-costly-recovery-lies/article_62618653-a5c8-5b4b-91a0-a3bf115afeb5.html) (Nebraska); Keith Darnay, *Burgum Declares Statewide Flood Emergency*, KX NEWS (Oct. 21, 2019), <https://www.kxnet.com/news/state-news/burgum-declares-statewide-flood-emergency/> (North Dakota); Heather Hollingsworth, *Missouri Declares State of Emergency Amid Flooding; Nebraska Estimates Over \$1 Billion in Damage*, CHICAGO TRIBUNE (Mar. 21, 2019), <https://www.chicagotribune.com/nation-world/ct-missouri-emergency-midwest-flooding-20190321-story,amp.html> (Missouri).

<sup>32</sup> John Chapman, *Fremont Farmers Lose Hundreds of Animals in Flood*, 6 NEWS (Mar. 19, 2019), <https://www.wowt.com/content/news/Fremont-farmers-lose-hundreds-of-animals-in-flood-507375061.html>.

<sup>33</sup> Cerussi & Anta, *supra* note 3.

<sup>34</sup> *Id.*

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

Many animals who perish during natural disasters such as storms die as a direct result, often by drowning. But another common cause is suffocation when outages shut down ventilation systems.<sup>37</sup> The problem of ventilation in factory farms reached the wider public's notice early in the COVID-19 pandemic, when the government shut down many slaughterhouses. With nowhere to send their animals, growers sought ways to cull their populations. The American Veterinary Medical Association (AVMA) describes the use of ventilation shutdown as a method for "depopulation" of farmed animals.<sup>38</sup> AVMA defines depopulation as "the rapid destruction of a population of animals in response to urgent circumstances with as much consideration given to the welfare of the animals as practicable."<sup>39</sup> Farms across the nation shut down their ventilation systems as a method to depopulate their facilities, killing millions.<sup>40</sup> During a natural disaster, power outages can shut down ventilation systems, suffocating animals in the same way.

Actions taken to protect companion animals contrast starkly with protections for farmed animals. For example, under the Pets Evacuation and Transportation Standards (PETS) Act, states, cities, and counties must "account for the needs of individuals with household pets and service animals before, during, and following a major disaster or emergency" in order to receive funding for their disaster relief plans.<sup>41</sup> More than 30 states have enacted laws that deal with

---

<sup>37</sup> Cameron Harsh, *Has Industry Learned Anything from Hurricane Florence?*, WORLD ANIMAL PROT. (May 18, 2021), <https://www.worldanimalprotection.us/blogs/has-industry-learned-anything-hurricane-florence>.

<sup>38</sup> AM. VETERINARY MED. ASS'N, AVMA GUIDELINES FOR THE DEPOPULATION OF ANIMALS: 2019 EDITION (2019), <https://www.avma.org/sites/default/files/resources/AVMA-Guidelines-for-the-Depopulation-of-Animals.pdf>.

<sup>39</sup> *Id.*

<sup>40</sup> Sophie Kevany, *Millions of US Farm Animals to be Culled by Suffocation, Drowning and Shooting*, THE GUARDIAN (May 19, 2020), <https://www.theguardian.com/environment/2020/may/19/millions-of-us-farm-animals-to-be-culled-by-suffocation-drowning-and-shooting-coronavirus>.

<sup>41</sup> 42 U.S.C. § 5196b(g).

disaster planning for companion animals.<sup>42</sup> There is no federal parallel of the PETS Act accounting for the needs of farmed animals in emergencies.

c. SITUATING INDEMNITY IN THE CONTEXT OF CLIMATE CHANGE

Climate change is relevant to a critique of the LIP and other statutory indemnity programs. The LIP and other programs have the power to incentivize climate adaptations. At the same time, climate change makes extreme weather more common, presumably increasing the cost of the LIP.

Federal policy has been criticized for its role in impeding adjustments in disaster-prone areas.<sup>43</sup> For instance, in their article on recurrent disasters and home development, Professors Michael Pappas and Victor B. Flatt explain that “poorly implanted disaster assistance and subsidized insurance policies can stimulate investment in risky areas where the market might not otherwise encourage it.”<sup>44</sup> The Coastal Zone Management Act,<sup>45</sup> which creates federal incentives for state coastal planning, does not require state governments to undertake climate adaptation planning.<sup>46</sup> FEMA-managed programs under the Disaster Mitigation Act do not require state disaster mitigation plans to address climate change, and federal disaster relief money has often been used to rebuild in flood-prone areas.<sup>47</sup>

---

<sup>42</sup> Cerussi & Anta, *supra* note 3.

<sup>43</sup> See, e.g., Michael Pappas & Victor B. Flatt, *Climate Changes Property: Disasters, Decommodification, and Retreat*, 82 OHIO ST. L. J. 331 (2021) (contending that federal disaster policies impede market adjustments by subsidizing hazardous redevelopment); Mark Hertsgaard, *Harvesting a Climate Disaster*, N.Y. TIMES (Sep. 21, 2012), <https://www.nytimes.com/2012/09/13/opinion/the-farm-bill-should-help-the-planet-not-just-crops.html?searchResultPosition=10> (arguing against expanded crop insurance programs under the proposed 2014 Farm Bill).

<sup>44</sup> Pappas & Flatt, *supra* note 43, at 340-41.

<sup>45</sup> 16 U.S.C. § 1451.

<sup>46</sup> Alice Kaswan, *Climate Adaptation and Land Use Governance: The Vertical Axis*, 39 COLUM. J. ENVTL. L. 390, 409 (2014).

<sup>47</sup> *Id.* at 410-411.



Journalist Mark Hertsgaard predicted the 2014 Farm Bill's impact on farms and the climate prior to its passage in a New York Times op-ed.<sup>48</sup> He argued that crop insurance programs would make farms more vulnerable to the impacts of climate change by preserving the status quo, rather than encouraging adoption of measures to reduce their climate vulnerability such as investing in healthier soil.<sup>49</sup> Hertsgaard criticized crop insurance programs for not imposing requirements to reduce climate vulnerability, and pointed out that funding for expanded crop insurance would be paid for by cutting the Conservation Stewardship Program.<sup>50</sup>

Accepted science indicates that climate change will cause more natural disasters, will cause them to become more severe, and may also cause them to overlap and occur simultaneously in many areas.<sup>51</sup> Adverse weather events are already becoming more severe due to climate change: Hurricane Harvey broke all-time U.S. rainfall records in 2017,<sup>52</sup> and federal disaster funding has increased tenfold in the past three decades.<sup>53</sup> The frequency of extreme weather events is expected to increase as is their severity.<sup>54</sup>

Modern conceptions of natural disasters emphasize the role of human preparation, or lack thereof. Through a modern lens, climate events are predictable constants. Human lack of preparation makes a disaster out of predictable climate events. For example, the United Nations

---

<sup>48</sup> Mark Hertsgaard, *Harvesting a Climate Disaster*, N.Y. TIMES (Sep. 21, 2012), <https://www.nytimes.com/2012/09/13/opinion/the-farm-bill-should-help-the-planet-not-just-crops.html?searchResultPosition=10>.

<sup>49</sup> *Id.*

<sup>50</sup> *Id.*

<sup>51</sup> See John Schwartz, *'Like a Terror Movie': How Climate Change Will Cause More Simultaneous Disasters*, N.Y. TIMES (Nov. 19, 2018), <https://www.nytimes.com/2018/11/19/climate/climate-disasters.html>.

<sup>52</sup> Merrit Kennedy, *Harvey the 'Most Significant Tropical Cyclone Rainfall Event in US History'*, NPR THE TWO-WAY (Jan. 25, 2018), <https://www.npr.org/sections/thetwo-way/2018/01/25/580689546/harvey-the-most-significant-tropical-cyclone-rainfall-event-in-u-s-history>.

<sup>53</sup> Jeff Stein & Andrew Van Dam, *Taxpayer Spending on U.S. Disaster Fund Explodes Amid Climate Change, Population Trends*, THE WASH. POST (Apr. 22, 2019), <https://www.washingtonpost.com/us-policy/2019/04/22/taxpayer-spending-us-disaster-fund-explodes-amid-climate-change-population-trends/>.

<sup>54</sup> Cole Hoyt, Note, *Before Disaster Strikes: Preparing America to Be Disaster Resilient*, 44 WM. & MARY ENVTL. L. & POL'Y REV. 817, 820 (2020).

Office for Disaster Risk Reduction differentiates between disasters and the phenomena that cause them.<sup>55</sup> This differentiation is intended to separate phenomena, which are natural, from disasters, which are the result of the lack of prevention and planning.<sup>56</sup> A World Bank blog piece pointed out the role of human prevention in disasters, emphasizing that natural disasters are not unpredictable.<sup>57</sup> For example, improved policies for earthquake disaster management and early warning systems in Chile, Colombia, and Costa Rica reduced fatalities from natural hazards in the region compared to a decade ago.<sup>58</sup>

Many organizations echo this conception of disasters. The International Federation of Red Cross uses a similar framework, using the terms “hazards” and “disasters” to explain that while hazards are natural and inevitable, disasters happen when a community is not properly organized to withstand the impact.<sup>59</sup> The Government Accountability Office defines disaster resilience as “actions to help prepare and plan for, absorb, recover from, and more successfully adapt to adverse events.”<sup>60</sup>

Governments have taken steps which acknowledge climate risks to reduce their vulnerability. For example, city officials in Fort Collins, Colorado passed regulations which prohibited construction in the Cache la Poudre River’s flood plain.<sup>61</sup> FEMA’s property acquisition program provides buyout funding for managed retreat initiatives with limited

---

<sup>55</sup> WE ARE WATER FOUNDATION, NATURAL PHENOMENA, HUMAN DISASTERS (Jun. 2, 2017), [https://www.wearewater.org/en/natural-phenomena-human-disasters\\_283421](https://www.wearewater.org/en/natural-phenomena-human-disasters_283421).

<sup>56</sup> *Id.*

<sup>57</sup> Niels Holm-Nielsen, *So-called Natural Disasters Are Not Unpredictable*, WORLD BANK BLOG (Apr. 17, 2012), <https://blogs.worldbank.org/latinamerica/so-called-natural-disasters-are-not-unpredictable>.

<sup>58</sup> *Id.*

<sup>59</sup> IFRC, WHAT IS A DISASTER?, <https://www.ifrc.org/what-disaster>.

<sup>60</sup> Hoyt, *supra* note 54, at 820 (citing Chris Currie, U.S. GOV’T ACCOUNTABILITY OFF., DISASTER RESILIENCE (May 14, 2014), <https://www.gao.gov/assets/gao-14-603t.pdf>).

<sup>61</sup> *Colorado City Revamps Flood Plain Management After Severe Flood*, PEW (Nov. 19, 2019), <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2019/11/colorado-city-revamps-flood-plain-management-after-severe-flood>.

success.<sup>62</sup> Though flawed, the National Flood Insurance Program has implemented resiliency standards in flood-prone areas.<sup>63</sup> But not all government programs are designed with resilience and climate change in mind.

Professors Pappas and Flatt explain the problem well as it applies to rebuilding after floods. According to a 2021 report, roughly 35 million homes, one-third of total housing stock, in the United States are at “high risk” of natural disaster.<sup>64</sup> 14.5 million homes in 2021 were impacted by a natural disaster in some degree, about one in ten homes.<sup>65</sup> Many American homes are vulnerable to disaster losses and that number is increasing.<sup>66</sup> Costs from flooding are building, but a significant portion of disaster costs are due to repairs for losses that occurred from the same property.<sup>67</sup> Professors Pappas and Flatt contend that absent assistance, the economic costs and risk from flooding would incentivize organic mitigation measures.<sup>68</sup> But by providing assistance to property owners seeking to rebuild in the same place after a natural disaster, the government is weakening that market incentive to take mitigation measures such as moving elsewhere or using stilts in flood-prone areas.<sup>69</sup>

---

<sup>62</sup> Pappas & Flatt, *supra* note 43, at 343.

<sup>63</sup> Thomas Frank, *Studies Sound Alarm on “Badly Out-of-Date” FEMA Flood Maps*, SCI. AM. E&E NEWS (Feb. 27, 2020), <https://www.scientificamerican.com/article/studies-sound-alarm-on-badly-out-of-date-fema-flood-maps/>.

<sup>64</sup> Diana Olick, *Nearly One-third of U.S. Homes Are at High Risk of Natural Disaster, Study Says*, CNBC (Jan. 27, 2021), <https://www.cnbc.com/2021/01/27/nearly-one-third-us-homes-natural-disaster-high-risk-new-study-says.html>; CORELOGIC HAZARD HQ TEAM, 2021 CLIMATE CHANGE CATASTROPHE REPORT (2021), <https://www.corelogic.com/intelligence/2020-climate-change-catastrophe-report/>.

<sup>65</sup> CORELOGIC HAZARD HQ TEAM, 2021 CLIMATE CHANGE CATASTROPHE REPORT (2021), <https://www.corelogic.com/intelligence/2020-climate-change-catastrophe-report/>.

<sup>66</sup> Anuradha Varansi, *Increasing Numbers of U.S. Residents Live in High-Risk Wildfire and Flood Zones. Why?*, COLUMBIA CLIMATE SCH. NEWS (Jan. 22, 2021), <https://news.climate.columbia.edu/2021/01/22/high-risk-wildfire-flood-zones/>.

<sup>67</sup> According to the Natural Resources Defense Council, the U.S. flood insurance program paid \$5.5 billion from 1978 to 2015 to repair and rebuild properties that had flooded more than once. See Pappas & Flatt, *supra* note 43, at 337 (citing Kevin Sack & John Schwartz, *As Storms Keep Coming, FEMA Spends Billions in ‘Cycle’ of Damage and Repair*, N.Y. TIMES (Oct. 8, 2018), <https://www.nytimes.com/2018/10/08/us/fema-disaster-recovery-climate-change.html>).

<sup>68</sup> Pappas & Flatt, *supra* note 43.

<sup>69</sup> *Id.*

To summarize, global warming is making adverse weather events more severe. However, human preparation and prevention can stop natural phenomena from becoming disasters. Government assistance like the Livestock Indemnity Program has the power to shield industry from forces which would otherwise encourage adaptation to climate risks. But government could also support and incentivize prevention and mitigation measures, saving taxpayer money along the way. Like the programs discussed here, the LIP has the power to encourage adoption of measures to protect animals.

#### IV. LEGAL FRAMEWORK

##### a. THE LIVESTOCK INDEMNITY PROGRAM

The focus of this paper is that the Livestock Indemnity Program (LIP) should be more protective of farmed animals in natural disasters by preconditioning aid on disaster precautions. For context, the Farm Service Agency is part of the U.S. Department of Agriculture and implements farm programs and farm loans to farmers and ranchers.<sup>70</sup> The Secretary of Agriculture (hereinafter “the Secretary”) is authorized to assign the FSA jurisdiction over a number of functions, including agricultural support programs like the LIP.<sup>71</sup> According to the FSA, the LIP provides benefits to livestock producers for animal deaths caused by adverse weather or by attacks by animals reintroduced into the wild by the federal government.<sup>72</sup>

The LIP compensates eligible livestock owners for eligible livestock deaths in excess of normal mortality that occurred in that year as a direct result of an eligible adverse weather event.<sup>73</sup> For a livestock owner to be an eligible owner under the Livestock Indemnity Program,

---

<sup>70</sup> See generally *Farm Service Agency Homepage*, U.S. DEP’T OF AGRIC. (Mar. 5, 2022, 3:08 PM), <https://www.fsa.usda.gov>.

<sup>71</sup> 7 U.S.C. § 6932(b).

<sup>72</sup> Farm Service Agency, *Disaster Assistance: Livestock Indemnity Program Fact Sheet*, U.S. DEP’T OF AGRIC., available at [https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/livestock\\_indemnity\\_program\\_lip-fact\\_sheet.pdf](https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/livestock_indemnity_program_lip-fact_sheet.pdf).

<sup>73</sup> 7 C.F.R. § 1416.301(b).

they must have legal ownership of the eligible animals at the time of their death.<sup>74</sup> Normal mortality under the LIP is computed by a percentage and represents the amount of expected livestock deaths by category that normally occur during a calendar year.<sup>75</sup> There is no requirement that livestock owners mitigate animal deaths through disaster-proofing measures in order to be eligible livestock owners.

An eligible adverse weather event means an extreme or abnormal damaging weather event that is not expected to occur when it did, and which results in eligible livestock death in excess of normal mortality.<sup>76</sup> Eligible adverse weather events can include earthquakes, lightning, tornados, certain winter storms, floods, wildfires, and more.<sup>77</sup> An eligible adverse weather event must directly result in the death of livestock according to the Secretary's determination "despite the livestock producer's performance of expected and normal preventative or corrective measures and good farming practices."<sup>78</sup> Drought is not an eligible adverse weather event because feed can be otherwise obtained.<sup>79</sup>

The final rules for the LIP describe what an eligible animal is in detail. Eligible livestock must be alpacas, dairy cattle, beef cattle, buffalo, beefalo, elk, emus, equine, llamas, sheep, goats, swine, poultry, deer, or reindeer.<sup>80</sup> For the purpose of indemnity payments, eligible livestock must have died as a direct result of an eligible adverse weather event.<sup>81</sup> The livestock must also have been "maintained for commercial use as part of a farming operation on the day they died."<sup>82</sup>

---

<sup>74</sup> *Id.* § 1416.303((a)(1).

<sup>75</sup> *Id.* § 1416.302.

<sup>76</sup> *Id.* § 1416.302.

<sup>77</sup> *Id.*

<sup>78</sup> 7 C.F.R. § 1416.301(b).

<sup>79</sup> *Id.*

<sup>80</sup> *Id.* § 1416.304(a).

<sup>81</sup> *Id.* § 1416.304(c)(1).

<sup>82</sup> *Id.* § 1416.304(c)(2).

When a livestock owner or grower applies for indemnity, they must provide supporting documents to show their eligibility. These may include evidence of loss, inventory numbers, and documentation of the adverse weather event.<sup>83</sup> There is no requirement to provide documentation showing measures taken to protect the deceased animals or prepare for climate risks.

The FSA determines normal mortality for each livestock category on a state-by-state basis each year.<sup>84</sup> Livestock deaths only receive benefits to the extent they exceed normal annual mortality. Livestock owners can expect to receive 75% of the average fair market value of each eligible animal.<sup>85</sup> Payment rates are provided by the FSA annually and break down each category of animal in detail, including some by age and weight.<sup>86</sup> Payment rates do not vary based on disaster precautions made by eligible livestock owners.

Livestock contract growers may also be eligible to receive assistance through the LIP, but only for poultry and swine.<sup>87</sup> Contract growers may collect benefits if they have a written agreement with the livestock owner, control of the eligible livestock on the day they died, and a risk of loss in the animal.<sup>88</sup> Payments to contract growers are based on 75% of the average income loss sustained by the death of an animal.<sup>89</sup> Only livestock owners are eligible to recover losses from injured livestock that were sold at a reduced price due to an eligible loss condition.<sup>90</sup> Contract growers also may not recover for losses that were compensated for them by the livestock owner.<sup>91</sup>

---

<sup>83</sup> *Id.* § 1416.305(c).

<sup>84</sup> *Id.* § 1416.306(a). For a breakdown of the different livestock categories, *see* 7 C.F.R. § 1416.304(d).

<sup>85</sup> 7 C.F.R. § 1416.306(b).

<sup>86</sup> *Supra* at note 72.

<sup>87</sup> *Id.*

<sup>88</sup> 7 C.F.R. § 1416.303(2).

<sup>89</sup> *Id.* § 1416.306(c).

<sup>90</sup> *Supra* at note 72.

<sup>91</sup> *Id.*

The 2018 Farm Bill made a couple of amendments to the Livestock Indemnity Program, removing some limitations. Under previous regulations, disease caused by adverse weather was only eligible if it were preventable by “following acceptable management practices, such as vaccination.”<sup>92</sup> The 2018 Farm Bill provided that livestock deaths due to extreme cold are eligible losses regardless of vaccination protocol.<sup>93</sup> This removes a layer of protection for animals.

There is little case law construing the Livestock Indemnity Program. One First Circuit Court of Appeals case centered on a fraudulent application for indemnity in which farmers exaggerated their losses.<sup>94</sup> Criminal liability for intentional inflation of livestock losses was based on federal criminal law around fraud against the government because there is no criminal provision in the LIP.<sup>95</sup> In *Boers v. United States*, another program administered by the FSA, the Dairy Indemnity Payment Program, was reviewed in the Court of Federal Claims.<sup>96</sup> The plaintiffs alleged that their benefits under the Dairy Indemnity Payment Program were miscalculated.<sup>97</sup> The court affirmed the calculation, holding that it was not arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.<sup>98</sup> This suggests that indemnity payments under the LIP would be reviewed using the arbitrary and capricious standard.

#### b. OTHER INDEMNITY PAYMENT PROGRAMS RUN BY THE FSA

---

<sup>92</sup> 7 C.F.R. § 1416.304(f)(1).

<sup>93</sup> *Supra* at note 72.

<sup>94</sup> *United States v. Alphonzo-Reyes*, 592 F.3d 280 (1st Cir. 2010).

<sup>95</sup> *Id.* at 284 (“Appellants were convicted of fraud and bribery”).

<sup>96</sup> *Boers v. United States*, 44 Fed. Cl. 725 (1999).

<sup>97</sup> *Id.* at 725.

<sup>98</sup> *Id.* at 731 (“We have reviewed the agency’s benefit calculation under [the arbitrary and capricious standard] and conclude that it is neither arbitrary, capricious, nor in violation of the law.”).

The FSA administers several indemnity payment programs which can be compared with the LIP. They include the Dairy Indemnity Payment Program,<sup>99</sup> the Livestock Forage Disaster Program,<sup>100</sup> and the Tree Assistance Program.<sup>101</sup> These programs were established to provide protection for farmers where private insurance companies deemed their insurance “too great a commercial hazard.”<sup>102</sup> The terms and conditions for aid under these programs share a couple of similarities. First, they restrict and define the group of “eligible” farmers or growers.<sup>103</sup> They often limit benefits by compensating recipients only for losses in excess of normal mortality or capping benefits after a period of time.<sup>104</sup> And they tend to limit assistance such that it cannot exceed profits that farmers would otherwise have earned absent their losses.<sup>105</sup>

Some indemnity payment programs administered by the FSA are governed by regulations that explicitly require exercise of good practices or a lack of fault by the recipient. For example, under the Dairy Indemnity Payment Program, if a farmer used the contaminant which was found in their milk, they must establish that the contamination was not their “fault.”<sup>106</sup> When the

---

<sup>99</sup> 7 U.S.C. § 4551 (providing for indemnity payments to farmers when their milk is removed from commercial market because of the presence of contaminants).

<sup>100</sup> See 7 C.F.R. §§ 760.301–.307 (establishing terms and conditions under which livestock producers may be compensated for grazing losses that occur due to drought or fire).

<sup>101</sup> See 7 C.F.R. §§ 760.500–507 (establishing terms and conditions under which tree growers may be compensated for tree losses that occur as a result of a natural disaster).

<sup>102</sup> *Williamson Farm v. Diversified Crop Ins. Servs.*, 917 F.3d 247, 249 (4th Cir. 2019) (quoting *Fed. Crop Ins. Corp. v. Merrill*, 332 U.S. 380, 383 n.1 (1947)).

<sup>103</sup> 7 C.F.R. § 760.2 (“affected farmer means a person who produces whole milk which is removed from the commercial market”) (Dairy Indemnity Program); 7 C.F.R. § 760.303 (“To be considered an eligible livestock producer [one] must . . . own, cash or share lease, or be a contract grower of covered livestock”) (Livestock Forage Disaster Program); 7 C.F.R. § 760.502 (“Eligible nursery tree grower means a person or legal entity that produces nursery, ornamental, fruit, nut or Christmas trees for commercial sale”) (Tree Assistance Program).

<sup>104</sup> The Dairy Indemnity Program limits its eligible period to 3 calendar months, The Livestock Forage Disaster Program limits benefits to losses occurring 180 days per year for fire or 3 months for drought, and the Tree Assistance Program requires a loss exceeding 15 percent of normal mortality. 7 C.F.R. § 760.3(b) (Dairy); 7 C.F.R. § 760.307(k); 7 C.F.R. § 760.503(a)(2) (Trees). The Livestock Forage Disaster Program is an exception to this rule, as it does not anticipate average annual forage land losses.

<sup>105</sup> This rule is required by statute for crops. 7 U.S.C. § 1531(b)(2)(B) (“The disaster assistance program guarantee for a crop . . . may not be greater than 90 percent of the sum of the expected revenue”). See also 7 U.S.C. § 1531(f)(3) (limiting assistance to 70 percent of the cost of replanting trees under the Tree Assistance Program).

<sup>106</sup> 7 C.F.R. § 760.8(b).



contaminant was not used by the farmer, regulations further require the farmer to show that they “did not know or have reason to believe” their feed or cows contained a violating substance and that the contamination was not otherwise their “fault.”<sup>107</sup> The Dairy Indemnity Payment Program also imposes an affirmative duty for eligible farmers to adopt recommended practices and take action “to eliminate or reduce chemical residues of violating substances” from their milk following initial discovery of the contamination.<sup>108</sup>

The Livestock Forage Disaster Program requires producers to have an insurance policy for the land incurring losses for which assistance is requested, as does the Tree Assistance Program.<sup>109</sup> The Tree Assistance Program only indemnifies losses that “could not have been prevented through reasonable and available measures.”<sup>110</sup> The Quality Loss Adjustment (QLA) Program was another indemnity payment program administered by the FSA.<sup>111</sup> The QLA Program provided disaster assistance for crop quality losses that were a consequence of qualifying weather events occurring in 2018 and 2019.<sup>112</sup> It did not provide assistance for losses that could have been mitigated with good farming practices.<sup>113</sup> Ineligible losses included those that were “the result of poor management decisions, poor farming practices,” and “failure to harvest or market the crop due to lack of a sufficient plan or resources.”<sup>114</sup>

c. THE ARTS AND ARTIFACTS INDEMNITY PROGRAM AS AN EXAMPLE OF  
LIMITING LIABILITY

---

<sup>107</sup> *Id.* § 760.8(c).

<sup>108</sup> *Id.* § 760.8(d).

<sup>109</sup> This requirement is called out in regulations as the “risk management purchase requirement,” and is defined in statute. 7 U.S.C. § 1531(d)(5)(A)(i) (describing the requirement); 7 C.F.R. § 760.305(d) (Forage); 7 C.F.R. § 760.504(a)(3) (Trees).

<sup>110</sup> 7 C.F.R. § 760.503(a)(3).

<sup>111</sup> *See* 7 C.F.R. §§ 760.1800–1814 (specifying the terms and conditions for the QLA Program).

<sup>112</sup> 7 C.F.R. § 760.1800.

<sup>113</sup> 7 C.F.R. § 760.1806; *see also* Agricultural Disaster Indemnity Programs, 86 FR 439-01.

<sup>114</sup> 7 C.F.R. § 760.1806(a).

Indemnity payment programs in other industries are useful to examine because they may provide alternative approaches to the administration of the Livestock Indemnity Program. The international loaning of art exhibitions was hindered in the past by the cost of insuring the exhibitions.<sup>115</sup> Congress passed the Arts and Artifacts Indemnity Act of 1975 to solve the problem of funds to acquire international exhibitions on loan.<sup>116</sup> The Arts and Artifacts Indemnity Act authorizes the Federal Council on the Arts and Humanities to make agreements to indemnify eligible items against loss or damages.<sup>117</sup> Eligible items include works of art, printed or published materials, photographs, motion pictures, and tapes which are of educational, cultural, historical, or scientific value.<sup>118</sup> At the time of its passage, the Arts and Artifacts Indemnity Act was expected to save museums between \$2 and \$3 million per year on insurance premiums for international shows.<sup>119</sup>

Parties must make an application to the Federal Council on the Arts and Humanities to make an indemnity agreement for eligible items.<sup>120</sup> If the Council approves an application, the indemnity agreement constitutes a contract pledging the full faith and credit of the United States to pay any amount for which the Council becomes liable.<sup>121</sup> There are limits on the coverage provided by indemnity agreements. The maximum coverage allowed for a single exhibition is

---

<sup>115</sup> Marilyn Phelan, *A Synopsis of the Laws Protecting Our Cultural Heritage*, 28 New Eng. L. Rev. 63, 106 (1993).

<sup>116</sup> Pub. L. No. 94-158, 2, 89 Stat. 844 (1975) (codified at 20 U.S.C. §§ 971-77).

<sup>117</sup> 20 U.S.C. § 971(a).

<sup>118</sup> *Id.* § 972(a).

<sup>119</sup> Nicole Bednarski, Comment, *Give Us Your Tired, Your Poor, Your Wretched Works of Art: American Museums Can Fix Them Up, Show Them, and Send Them Back with Help from the Arts Indemnity Act*, 11 VILL. SPORTS & ENT. L. J. 383, 410 n.21 (2004).

<sup>120</sup> 20 U.S.C. § 973(a).

<sup>121</sup> *Id.* § 973(c).

\$1,000,000,000.<sup>122</sup> There is also a limit on the total dollar amount of all indemnity agreements at any one time,<sup>123</sup> and a provision for deductibles according to indemnified value.<sup>124</sup>

There are a couple of ways the program accounts for higher-risk exhibitions. The National Endowment for the Arts administers the indemnity program on behalf of the Federal Council on the Arts and Humanities.<sup>125</sup> The National Endowment for the Arts advises that “for reasons of risk, the Federal Council is generally opposed to indemnifying” fragile items such as oil on copper paintings and certain types of glass.<sup>126</sup> In addition, the application for indemnification requests thorough information about measures taken to safeguard items in an exhibition. The application requires “statements describing policies, procedures, techniques, and methods to be employed with respect to” packing of items, condition of items at both the lender and borrower’s locations, and the “maximum values to be transported in a single vehicle of transport.”<sup>127</sup>

Three years after the Act’s passage, the Office of Legal Counsel published an opinion interpreting the Act, finding that it does not require an indemnity agreement to cover the entire value of an exhibit.<sup>128</sup> This opinion was prompted by the Federal Council’s allotment of indemnification for an exhibit from East Germany in the National Gallery of Art.<sup>129</sup> The Council allotted indemnification of \$50 million, but excluded from coverage two-thirds of the value of

---

<sup>122</sup> *Id.* § 974(c).

<sup>123</sup> *Id.* § 974(b).

<sup>124</sup> *Id.* § 974(d).

<sup>125</sup> *Arts and Artifacts Indemnity Program: Domestic Indemnity*, NATIONAL ENDOWMENT FOR THE ARTS (Nov. 7, 2020, 5:44 PM), <https://www.arts.gov/impact/arts-and-artifacts-indemnity-program/domestic-indemnity>.

<sup>126</sup> *Id.*

<sup>127</sup> 45 C.F.R. § 1160.4 (1991).

<sup>128</sup> *Arts and Artifacts Indemnity Act - Statutory Limits - Dresden Exhibit*, 2 Op. Off. Legal Counsel 34 (1978). *See also* Nicole Bednarski, Comment, *Give Us Your Tired, Your Poor, Your Wretched Works of Art: American Museums Can Fix Them Up, Show Them, and Send Them Back with Help from the Arts Indemnity Act*, 11 VILL. SPORTS & ENT. L. J. 383, 388-391 (2004).

<sup>129</sup> *Arts and Artifacts Indemnity Act - Statutory Limits - Dresden Exhibit*, 2 Op. Off. Legal Counsel 34, 34–35 (1978).

porcelains and three-fourths of the value of panel paintings.<sup>130</sup> The General Counsel of the National Endowment for the Humanities challenged this allotment, arguing that Congress intended that indemnity agreements must cover the full value of items indemnified.<sup>131</sup> The Office of Legal Counsel disagreed with this characterization.<sup>132</sup>

When the United States agrees to indemnify artifacts such as porcelains and panel paintings, it has the authority to limit its exposure to an amount less than the items' full value.<sup>133</sup> This authority comes from the Federal Council's duty "to protect the financial interest of the United States."<sup>134</sup> The Council is also empowered to refuse to indemnify any items "in the face of an unacceptable risk."<sup>135</sup> The Council is justified in fully indemnifying, denying indemnification, or taking an intermediate stance according to "its evaluation of the risks of a particular situation."<sup>136</sup>

## V. ANALYSIS

### a. INDEMNITY PROGRAMS, DISASTER PREPAREDNESS, AND CLIMATE CHANGE GO HAND-IN-HAND

In discussing the impact of climate on animal agriculture, it is worth acknowledging the impact animal agriculture has on the climate. Accepted science shows that animal agriculture is a significant contributor to climate change.<sup>137</sup> Livestock production is responsible for more than thirty percent of the United States' emissions of methane, a gas that has 21 times the global warming potential of carbon dioxide.<sup>138</sup> Eight American slaughterhouses consistently rank

---

<sup>130</sup> *Id.*

<sup>131</sup> *Id.* at 35.

<sup>132</sup> *Id.*

<sup>133</sup> *Id.* at 38.

<sup>134</sup> *Id.* at 37 (quoting 20 U.S.C. § 971(a)(2)).

<sup>135</sup> *Id.*

<sup>136</sup> *Id.*

<sup>137</sup> See Joanna M. Foster, *A Climate Hazard, Medium Rare, Please*, N.Y. TIMES (Jul. 18, 2011), <https://green.blogs.nytimes.com/2011/07/18/a-climate-hazard-medium-rare/?searchResultPosition=16>.

<sup>138</sup> Lisa Weinbarger, Comment, *Standing Behind Beastly Emissions: The U.S. Subsidization of Animal Agriculture Violates the United Nations Framework Convention on Climate Change*, 27 Am. U. Int'l L. Rev. 991, 1008 (2012).

among the twenty worst industrial polluters in the nation, responsible for the discharge of thirty million pounds of contaminants each year.<sup>139</sup> By some estimates, agriculture as a whole accounts for roughly a third of global emissions.<sup>140</sup> Animal agriculture also pollutes the environment in the aftermath of natural disasters like floods.<sup>141</sup> Therefore, animal agriculture contributes to climate change while also being threatened by it.

Current government programs, including the Livestock Indemnity Program, perpetuate the reinforcing connection between agriculture and the climate events threatening it by shielding agriculture from the impacts of climate change and externalizing its costs.<sup>142</sup> The Livestock Indemnity Program produces problematic incentives similar to the NFIP policies described by Professors Pappas and Flatt.<sup>143</sup> On the whole, the LIP shields producers from the economic costs of animal deaths.<sup>144</sup> This dampens what would be an organic incentive to prepare for disasters in advance to mitigate losses. If farmers were not indemnified for preventable deaths, then farmers would have to take steps to prevent death at the risk of enormous economic losses.

The LIP has had other unanticipated effects. Prior to implementation of the LIP, it was common to find animals seeking higher grounds after floods. This is because farmers would open their farm doors to give their animals a better chance at survival.<sup>145</sup> The number of animals

---

<sup>139</sup> Joanna M. Foster, *A Climate Hazard, Medium Rare, Please*, N.Y. TIMES (Jul. 18, 2011), <https://green.blogs.nytimes.com/2011/07/18/a-climate-hazard-medium-rare/?searchResultPosition=16>.

<sup>140</sup> Mark Hertsgaard, *Harvesting a Climate Disaster*, N.Y. TIMES (Sep. 21, 2012), <https://www.nytimes.com/2012/09/13/opinion/the-farm-bill-should-help-the-planet-not-just-crops.html?searchResultPosition=10>.

<sup>141</sup> Jessie Higgins, *Nebraska Scrambles to Clear Away Cattle Carcasses Scattered by Flooding*, UNITED PRESS INT'L (Apr. 10, 2019), [https://www.upi.com/Top\\_News/US/2019/04/10/Nebraska-scrambles-to-clear-away-cattle-carcasses-scattered-by-flooding/6501554855042/](https://www.upi.com/Top_News/US/2019/04/10/Nebraska-scrambles-to-clear-away-cattle-carcasses-scattered-by-flooding/6501554855042/) (describing harmful impact of dead cattle carcasses following 2019 flooding in Nebraska).

<sup>142</sup> See Mark Hertsgaard, *Harvesting a Climate Disaster*, N.Y. TIMES (Sep. 21, 2012), <https://www.nytimes.com/2012/09/13/opinion/the-farm-bill-should-help-the-planet-not-just-crops.html?searchResultPosition=10>.

<sup>143</sup> See Pappas & Flatt, *supra* note 43.

<sup>144</sup> See *infra* section IV.a.

<sup>145</sup> Cerussi & Anta, *supra* note 3.

documented doing so has decreased due to the LIP because farmers are keeping their doors closed so that drowned animals can be counted more easily.<sup>146</sup> It is important for farmers to count deaths, but the LIP should not inadvertently incentivize a practice which increases risk to animals.

The LIP in its current form fails to appreciate the nature of adverse weather events. It treats animal losses as inevitable consequences of natural hazards without addressing the role of farmers in preparing and mitigating their losses. The structure of the LIP also overlooks the program's role in shaping farmers' behavior. The LIP should instead be situated within the context of climate change and resilience. The structure of subsidization under the LIP could cause farmers to bolster their climate resilience and protections for their animals.

b. OTHER INDEMNITY PAYMENT PROGRAMS ARE VALUABLE MODELS FROM WHICH SOLUTIONS FOR THE LIP CAN BE FOUND

A comparison of the Livestock Indemnity Program and other statutory indemnity programs is revealing. The LIP lacks many of the limitations present in other statutory indemnity programs. No animals are apparently excluded from indemnity for the purposes of reducing risk.<sup>147</sup> There are no requirements to mitigate risk of animal deaths from adverse weather events. And there are only weak requirements to follow best practices in protecting animals from adverse weather events.<sup>148</sup> The LIP effectively looks more like a blank check to livestock growers than a carefully designed safety net.

---

<sup>146</sup> *Id.*

<sup>147</sup> *Cf. Arts and Artifacts Indemnity Program: Domestic Indemnity*, NAT'L ENDOWMENT FOR THE ARTS (Nov. 7, 2020, 5:44 PM), <https://www.arts.gov/impact/arts-and-artifacts-indemnity-program/domestic-indemnity> (describing an opposition to indemnifying fragile items under the Arts & Artifacts Indemnity Program).

<sup>148</sup> *See* 7 C.F.R. § 1416.301(b). An eligible adverse weather event must directly result in the death of livestock "despite the livestock producer's performance of expected and normal preventative or corrective measures and good farming practices." However, this standard is not further defined and there is no case law construing it.

Mitigation is required in several other indemnity programs. Many indemnity programs make ineligible losses that can be ascribed to a failure to use good practices or mitigate losses. These include the Quality Loss Adjustment Program, the Tree Assistance Program, and the Dairy Indemnity Payment Program.<sup>149</sup> Other indemnity programs exclude from coverage products that are more fragile or expensive, such as the Arts and Artifacts Indemnity Program.<sup>150</sup> The LIP, in contrast, does not require mitigation or precautions.

Upon discovery of contamination of milk under the Dairy Indemnity Payment Program, there is an affirmative duty for eligible farmers to take action to eliminate or reduce the violating substances.<sup>151</sup> The LIP could mirror such a duty upon warning of an adverse weather event. Rather than eliminating contaminants, the LIP could require farmers who anticipate severe weather to attempt to move their animals to a safer area. It is very difficult for factory farms to move their large numbers of animals, but the LIP need not require successful evacuation. Mirroring language found in the Tree Assistance program, the LIP could require farmers to attempt evacuation “through reasonable and available measures.”<sup>152</sup>

Other statutory indemnity programs reflect an awareness of the government’s exposure to liability. The Arts and Artifacts Indemnity Program explicitly caps the total indemnity available at any one time.<sup>153</sup> The LIP contains no total annual cap.<sup>154</sup> But the cost of indemnifying livestock losses is significant. In the 2019 Midwestern floods alone, Nebraska’s governor

---

<sup>149</sup> See 7 C.F.R. §§ 760.1800–1814 (QLA Program); 7 C.F.R. §§ 760.500–507 (Tree Assistance Program); 7 U.S.C. § 4551 (Dairy Indemnity Payment Program).

<sup>150</sup> 20 U.S.C. §§ 971–976.

<sup>151</sup> 7 C.F.R. § 760.8(d).

<sup>152</sup> *Id.* § 760.503(a)(3).

<sup>153</sup> The maximum aggregate loss covered by indemnity agreements at any one time under the Arts and Artifacts Indemnity Program is \$15,000,000,000 for international exhibitions and \$7,500,000,000 for domestic exhibitions. 20 U.S.C. § 974(b).

<sup>154</sup> The FSA does cap assistance for individual entities at \$125,000 for the LIP, Livestock Forage Program, and ELAP combined annually. 7 C.F.R. § 1416.6(b)(1).

estimated \$400 million in cattle losses.<sup>155</sup> A cap on the government’s exposure under the LIP would share some characteristics with requirements to secure insurance. The Livestock Forage Disaster Program and the Tree Assistance Program require producers to have an insurance policy for the land incurring losses for which assistance is requested.<sup>156</sup> By requiring recipients have minimum insurance coverage, the government can avoid paying for the totality of the losses caused by a disaster.

The Arts and Artifacts Indemnity Program provides another concept that could be adopted by the LIP — excluding riskier items from coverage. Under the Arts and Artifacts Indemnity Program, the National Endowment for the Arts advises that they are “generally opposed to indemnifying” fragile items such as oil on copper paintings and certain types of glass.<sup>157</sup> The Arts and Artifacts Indemnity Program also allows partial coverage for fragile items according to the Federal Council’s assessment of risk.<sup>158</sup> The Council has a duty to protect the financial interest of the United States, and is empowered to take an intermediate stance according to “its evaluation of the risks of a particular situation.”<sup>159</sup> Concentrated animal operations reliant on ventilation systems with no back-up power source might fairly be compared with expensive fragile glasswork — a minor power outage has the potential to kill thousands of animals living in one such facility.<sup>160</sup> The LIP could couch mitigation requirements in the context of the risk of liability posed by unprepared farmers.

---

<sup>155</sup> Bill Spiegel, *Nebraska Flood Damage: \$1.5 Billion and Rising*, SUCCESSFUL FARMING (Mar. 20, 2019), <https://www.agriculture.com/news/nebraska-flood-damage-15-billion-and-rising>.

<sup>156</sup> This requirement is called out in regulations as the “risk management purchase requirement,” and is defined in statute. 7 U.S.C. § 1531(d)(5)(A)(i) (describing the requirement); 7 C.F.R. § 760.305(d) (Forage); 7 C.F.R. § 760.504(a)(3) (Trees).

<sup>157</sup> *Arts and Artifacts Indemnity Program: Domestic Indemnity*, NAT’L ENDOWMENT FOR THE ARTS (Nov. 7, 2020, 5:44 PM), <https://www.arts.gov/impact/arts-and-artifacts-indemnity-program/domestic-indemnity>.

<sup>158</sup> See Arts and Artifacts Indemnity Act - Statutory Limits - Dresden Exhibit, 2 Op. Off. Legal Counsel 34, 37–38 (1978).

<sup>159</sup> Arts and Artifacts Indemnity Act - Statutory Limits - Dresden Exhibit, 2 Op. Off. Legal Counsel 34, 37 (1978).

<sup>160</sup> Cerussi & Anta, *supra* note 3.



To summarize, there are many ways the LIP could incorporate additional requirements to protect farmed animals. The FSA could advise that they are opposed to providing full benefits for losses in high-risk facilities, like factory farms without backup power. The LIP could define eligible losses more narrowly, covering only losses that were not due to a lack of care or best practices, and defining best practices with specificity. The LIP could also impose affirmative duties, such as attempting evacuation of animals when feasible. Each approach has certain challenges. In the next section, I describe how the LIP could practically implement such changes.

c. A REQUIREMENT FOR DISASTER PRECAUTIONS CAN BE ADDED TO THE LIP BY DEFINING THE STANDARD FOR “GOOD FARMING PRACTICES”

The previous section identified many features of other statutory indemnity programs which could be added to the Livestock Indemnity Program to improve it. It is difficult to advocate for changes to the LIP. The agriculture industry is monolithic and exerts significant influence in academic research, agriculture policy development, government regulation, and enforcement.<sup>161</sup> Any proposed changes to the LIP would meet stiff resistance.

Another barrier to amending the LIP is the fact that even well-intended mitigation programs are difficult to design and may have unintended consequences. The National Flood Insurance Program is a prime example of this challenge. With a key goal being mitigation, the NFIP would provide for government buy-outs of property in flood zones to prevent rebuilding in high-risk areas.<sup>162</sup> But assistance to rebuilders and local government inefficiencies mean that buy-outs rarely happen, and the program is often criticized for allowing funding to support

---

<sup>161</sup> PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 33, available at [https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content\\_level\\_pages/reports/pcfifapfinalpdf.pdf](https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content_level_pages/reports/pcfifapfinalpdf.pdf)

<sup>162</sup> Pappas & Flatt, *supra* note 43.

rebuilding in flood-prone areas.<sup>163</sup> When updating the LIP, consideration should be given to the direction new incentives will flow.

Additionally, though animal welfare advocates are loathe to think of animals as merely economic units, they are an asset for farmers. Animal deaths can represent millions in losses for farmers. The rise of factory farms can be explained in part by market forces which incentivize large-scale operations, and smaller farms are on the decline.<sup>164</sup> But communities are better off with larger numbers of small locally owned farms than with fewer, large farms.<sup>165</sup> Farmers may rightfully argue that they need federal assistance to keep their businesses alive after a natural disaster. Many businesses do not survive severe weather events. Denying assistance to farms may inadvertently hasten the consolidation of farming towards large, factory farm models.

Using the phrase “good farming practices” as a hook to build up a requirement for disaster precautions is a viable approach. Under the LIP, an eligible adverse weather event must directly result in the death of livestock according to the Secretary’s determination “despite the livestock producer’s performance of expected and normal preventative or corrective measures and good farming practices.”<sup>166</sup> Here, the LIP mirrors language found in other programs run by the FSA, referencing “normal preventative” measures and “good farming practices.”<sup>167</sup> But these measures and practices are not defined further, and there is no case law construing this language.

Amendments to the LIP could build on this language restricting eligible deaths, defining required measures and practices with more specificity.

---

<sup>163</sup> *Id.*

<sup>164</sup> *See* PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 33, available at [https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content\\_level\\_pages/reports/pcfifapfinalpdf.pdf](https://www.pewtrusts.org/-/media/legacy/uploadedfiles/phg/content_level_pages/reports/pcfifapfinalpdf.pdf).

<sup>165</sup> *See id.*

<sup>166</sup> 7 C.F.R. § 1416.301(b).

<sup>167</sup> *Id.*

So how should “good farming practices” be defined? One place to start is the Federal Emergency Management Agency’s (FEMA) guidance for farmers. FEMA provides practical advice to farmers for mitigating disasters.<sup>168</sup> This includes building buildings to meet or exceed construction codes, storing chemicals in storm-proof buildings, and draining ponds that could flood.<sup>169</sup> For fires, FEMA recommends installing sprinkler systems, using qualified electricians to install electrical wiring, and consulting with local fire departments for recommendations on fire safety.<sup>170</sup> FEMA also suggests securing a generator for emergencies considering that many livestock operations rely heavily on electrical power for fans and other machinery.<sup>171</sup> In acknowledgment of farmers’ reliance on electrical power, FEMA suggests that farmers secure generators.<sup>172</sup> When farms lose power during a disaster, ventilation shutdowns can kill thousands of animals.<sup>173</sup> FEMA also recommends installing sprinkler systems, which would help protect animals from fires.<sup>174</sup> The LIP could require farmers who rely on ventilation systems to have back-up generators and sprinkler systems to be eligible for assistance.

Farmers should be required to supply documentation of their good farming practices when they apply for LIP indemnity payments. This can include documentation of disaster precautions and steps taken to mitigate harm from disasters. There are many ways to define good farming practices, but most relevant for the LIP is disaster precautions. In this way, the LIP would better incentivize climate resilience.

---

<sup>168</sup> FED. EMERGENCY MGMT. AGENCY, THE CARE OF LIVESTOCK AND HORSES IN DISASTERS (*available at* [https://training.fema.gov/emiweb/downloads/is10\\_a-8.pdf](https://training.fema.gov/emiweb/downloads/is10_a-8.pdf)).

<sup>169</sup> *Id.*

<sup>170</sup> *Id.*

<sup>171</sup> *Id.*

<sup>172</sup> FED. EMERGENCY MGMT. AGENCY, THE CARE OF LIVESTOCK AND HORSES IN DISASTERS (*available at* [https://training.fema.gov/emiweb/downloads/is10\\_a-8.pdf](https://training.fema.gov/emiweb/downloads/is10_a-8.pdf)).

<sup>173</sup> Cerussi & Anta, *supra* note 3.

<sup>174</sup> *Id.*

Defining “good farming practices” can also provide a hook for the sort of limited indemnity provided by the Arts and Artifacts Indemnity Program. As discussed above, concentrated animal operations reliant on ventilation systems with no back-up power source might fairly be compared with expensive fragile glasswork.<sup>175</sup> The LIP could couch mitigation and disaster precaution requirements in the context of the risk of liability posed by unprepared farmers. In this manner, when a farmer does not have documentation of any affirmative disaster precautions, the government could justifiably compensate them at a lower rate. This would be a more responsible way to spend taxpayer money.

## V. CONCLUSION

The Livestock Indemnity Program is indirectly responsible for many preventable animal deaths. It has shielded farmers from the economic forces which would otherwise lead them to take strong preventative measures to protect their animals. Additional requirements for eligible farmers would not be unprecedented in the landscape of other statutory indemnity programs. A key opportunity is defining good farming practices in a way that would require disaster precautions, such as installing generators and sprinkler systems on site for all eligible producers. This has the potential to save millions of animal lives and make farmers more climate resilient.

---

<sup>175</sup> See Cerussi & Anta, *supra* note 3.