

11-8-2018

Continental Divides: How Wolf Conservation in the United States and Europe Impacts Rural Attitudes

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<http://dx.doi.org/>

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Continental Divides: How Wolf Conservation in the United States and Europe Impacts Rural Attitudes

Holly Firlein*

The shepherd drives the wolf from the sheep's throat, for which the sheep thanks the shepherd as a liberator, while the wolf denounces him for the same act as the destroyer of liberty, especially as the sheep was a black one. Plainly the sheep and the wolf are not agreed upon a definition of the word liberty.¹

Wolves are controversial carnivores whose management generates intense debate. That debate, and the response from wolf managers, often fails to adequately account for rural communities' fears about wolves. These fears, if ignored, can lead to the frustration of conservation objectives and a disrespect for the law itself. In order to avoid these consequences, nongovernmental organizations and governments involved in wolf management must survey rural communities and implement wolf management strategies that account for rural concerns while honoring conservation objectives. This Note explores rural attitudes and their consequences in the United States and Europe, and proposes a new way forward in navigating the divide between rural stakeholders and wolf managers.

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DOI: <https://doi.org/10.15779/Z38XS5JH2K>

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* J.D., University of California, Berkeley, School of Law (Boalt Hall), 2018. I would like to thank Professor Holly Doremus and teaching assistant Giulia Gualco-Nelson for their continued advice, support, and invaluable suggestions throughout the writing process. I am also extremely grateful to the ELQ members and executive editors for all of their hard work in editing this piece.

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INTRODUCTION

In May of 2016, the New Mexico Department of Game and Fish filed suit against the United States Fish and Wildlife Service (FWS), alleging that FWS

illegally imported Mexican gray wolves into New Mexico.² This case set an important legal precedent, but it is more interesting for its symbolism as a consequence of ignoring the concerns of rural communities in carnivore conservation and management. In 2011, New Mexico stopped collaborating with FWS on the Mexican gray wolf reintroduction program and asked FWS to apply for state permits before releasing wolves within the state.³ When FWS did so, the permits were denied on the grounds that FWS did not demonstrate that the releases were part of a federal management plan or strategy.⁴ FWS ignored the permit decision and released wolves into New Mexico, which gave rise to the litigation.⁵ The case was a win for carnivore conservation, as the court lifted the challenged preliminary injunction on gray wolf importation in New Mexico.⁶ Even though FWS won, the federal government was forced to expend resources on a legal battle—resources that could have been put to work achieving FWS’s conservation objectives. The litigation might have been avoided had FWS done more to understand and assuage New Mexico’s concerns about Mexican gray wolves. Conflicts over wolf conservation are ongoing in New Mexico and beyond.

Wolves present an opportunity to take a global look at how rural attitudes and concerns are or are not incorporated into conservation management plans. Wolves were once the most widely distributed nonhuman land mammal worldwide.⁷ They still inhabit much of the world, including Europe, North America, India, and the Middle East, and are an extremely divisive species.⁸ As one reporter put it, “[w]hile supporters [of wolves] regard themselves as caring for the planet, opponents see themselves as in touch with the earth.”⁹ These seemingly similar characterizations result in vastly divergent views, with people perceiving wolves more favorably the farther they live from them.¹⁰ Since wolves are quite widespread and their existence in human-inhabited areas is controversial, they provide an excellent vehicle for examining how governments and nongovernmental organizations (NGOs) attempt to incorporate rural attitudes into their conservation goals and management. For instance, in some states, such as Washington, wolves are managed in part by advisory groups that include stakeholders from rural communities, industry, and environmental

2. N.M. Dep’t of Game & Fish v. U.S. Dep’t of the Interior, 854 F.3d 1236, 1244–45 (10th Cir. 2017).

3. *Id.* at 1243.

4. *Id.* at 1243–44.

5. *Id.* at 1244.

6. *Id.* at 1256.

7. L. David Mech, *Where Can Wolves Live and How Can We Live with Them?*, 210 *BIOLOGICAL CONSERVATION* 310, 310 (2017).

8. *Id.*

9. *The Wolf Returns: Call of the Wild*, *ECONOMIST*, Dec. 22, 2012, at 111, 113.

10. *See id.*

groups in an effort to directly include rural people in the decision-making process.¹¹

Rural communities are substantially more opposed to wolf reintroduction and conservation than urban communities. Both the economic harm caused by wolves and the deeper fears and concerns about cohabitating with wolves drive this sentiment. The attitudes of the rural communities that interact with wolves are important to the legitimacy and life of conservation legislation, to the ultimate conservation goals that such legislation is trying to achieve, and to the very idea of a democratic society in which all are treated equally. Recent legislative efforts and well-meaning NGOs have failed rural communities by focusing their rhetoric and solutions almost exclusively on the economic concerns of rural communities. By failing to address the deeper anxieties of rural people, governments and NGOs reveal their *otherness* and deepen the cultural divide between urban and rural communities. In order to more fully engage with rural communities, NGOs must continue to involve local stakeholders in creating solutions that allow wolves to coexist with farmers, ranchers, and hunters. But that alone isn't enough; these organizations must also measure their progress, not only by noting the number of sheep, cows, and wolves they have saved, but by how successfully they are changing rural attitudes towards wolves. Improving rural attitudes towards wolves will make conservation easier by reducing poaching and political opposition.

I. HOW DO RURAL COMMUNITIES FEEL ABOUT WOLVES?

Before exploring how rural communities in the United States and Europe feel about wolves, it is necessary to recognize that rural communities are not homogenous. Subsets of rural populations from a single geographic area may have vastly divergent views on wolf conservation. For example, one study of rural Norwegian attitudes found that farmers tend to have a negative view of wolves, while hunters have generally positive attitudes.¹² This dichotomy, though, does not apply everywhere. In Wisconsin, for instance, bear hunters are more likely than farmers or ranchers to favor reducing or eliminating the state's wolf population.¹³ Rural tribal groups in the United States are often in favor of wolf conservation, respecting wolves while living near them.¹⁴ These geographic and social-group differences demonstrate that rural communities are far from homogenous in their feelings on wolves. However, overall, rural communities that live in close proximity to wolves tend to have a more negative view of wolves than urban populations, and those who interact with wolves most

11. See, e.g., *Wolf Advisory Group*, WA. DEP'T OF FISH & WILDLIFE, <https://wdfw.wa.gov/about/advisory/wag/> (last visited Jan. 21, 2018).

12. Tore Bjerke et al., *Attitudes Toward Wolves in Southeastern Norway*, 11 SOC'Y & NAT. RESOURCES 169, 173–74 (2008).

13. Lisa Naughton-Treves et al., *Paying for Tolerance: Rural Citizens' Attitudes Toward Wolf Depredation and Compensation*, 17 CONSERVATION BIOLOGY 1500, 1505 (2003).

14. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113.

frequently have the most negative feelings.¹⁵ Familiarity, as they say, breeds contempt. This Part will explore the most common sources of animus toward wolves, divided into economic, emotional, and balance of power concerns.

A. *Wolves Can Damage the Economies of Rural Communities*

Supporters of wolves are not oblivious to the economic consequences of wolves coexisting with people. Guillaume Chapron of the Grimsö Wildlife Research Station in Sweden compared wolf conservation to gender equality, stating, “We support it not because it is economically efficient, but because we are a modern society which believes that women should have the same rights as men. Similarly, we believe that a modern wealthy society can share its landscape with other species.”¹⁶ Unfortunately, the economic inefficiencies that wolf supporters are willing to countenance are borne not by them, but by rural communities who do not support wolf conservation. Indeed, many wolf supporters “enjoy the environmental, aesthetic, and economic benefits of restoring wolves However, the direct costs of conserving these animals fall on a minority of individuals in rural areas who lose livestock or pets to carnivores.”¹⁷

1. *Livestock Losses Frustrate Ranchers and Farmers*

Depredation of livestock is one of the most widely cited reasons for rural hatred of wolves.¹⁸ Indeed, one study of rural attitudes in Wisconsin found that the majority of respondents were concerned with depredation of livestock and pets.¹⁹ In Bulgaria, the majority of people who oppose wolf conservation do so because wolves kill livestock.²⁰ One Swedish participant in a local wolf council

15. See, e.g., Jukka Bisi et al., *The Good Bad Wolf-Wolf Evaluation Reveals the Roots of the Finnish Wolf Conflict*, 56 EUR. J. WILDLIFE RES. 771, 776 (2010) (noting that Finns who live near stable wolf populations and interact with wolves frequently express more negative characteristics when describing wolves); see also Max Eriksson et al., *Direct Experience and Attitude Change Towards Bears and Wolves*, 21 WILDLIFE BIOLOGY 131, 132, 135 (2015) (noting the predominantly rural nature of the area where wolves inhabit and finding that Swedes with direct experience with wolves were more likely to have negative attitudes toward wolves). But see Adrian Treves et al., *Longitudinal Analysis of Attitudes Toward Wolves*, 27 CONSERVATION BIOLOGY 315, 320 (2013) (finding that in Wisconsin, length of exposure to wolves “was not correlated with change in attitude” but “[d]irect negative experiences with wolves . . . were weakly and inconsistently associated with diminished individual tolerance”).

16. *The Wolf Returns: Call of the Wild*, supra note 9, at 113.

17. Naughton-Treves et al., supra note 13, at 1501.

18. See, e.g., Mech, supra note 7, at 312 (noting that the reason wolves were exterminated in much of their range was “primarily because of their depredations on livestock”); *The Wolf Returns: Call of the Wild*, supra note 9, at 113 (interviewing rancher who lost \$42,000 of cattle to wolf depredation); Patrick Barkham, *‘It’s Very Scary in the Forest’: Should Finland’s Wolves Be Culled?*, GUARDIAN (Feb. 25, 2017), <https://www.theguardian.com/world/2017/feb/25/europe-wolf-population-finland-culling-protection> (“[F]armers say, ‘We can’t survive with wolves, they are destroying our livestock.’”).

19. Naughton-Treves et al., supra note 13, at 1508.

20. HANS WILPSTRA, VHL UNIV. OF APPLIED SCIENCE, WHAT DO WE EAT TONIGHT? A STUDY ON INTERACTIONS BETWEEN WOLVES, HUMANS AND SCAVENGERS IN THE KRESNA GORGE, BULGARIA 16 (2015), <http://fwff.org/docs/Interactions-between-wolves-humans-and-scorpengers.pdf>.

noted, “There is no sheep farming anymore in some areas . . . of the country where there are lots of wolves and bears . . . the land is no longer grazed.”²¹ Beyond direct depredation losses, the presence of wolves can stress livestock, leading some ranchers and farmers to assert that wolves also reduce productivity of livestock operations through stress-related deaths and miscarriages.²² While these losses may not have substantial impacts on the overall livestock industry, they can have significant financial impact on individual ranchers.²³

Livestock losses have led farmers to take protective measures. In Finland, farmers are installing electrified fences, keeping their livestock indoors, and grazing their livestock closer to their homes.²⁴ In Idaho, one hunter cited livestock losses as the main reason for a wolf hunting derby, in which cash prizes are awarded to the hunters who kill the most wolves and coyotes.²⁵

2. Hunters are Economically Impacted by Wolves Killing Game Animals and Hunting Dogs

Wolves impact hunters by preying upon hunted animals, which reduces the number of animals available to these hunters. In Idaho, reduced elk populations have led to shorter hunting seasons.²⁶ And while many factors cause lower prey animal populations including predators other than wolves, many hunters place the blame squarely with wolves.²⁷ Families are “frustrated that they are having to give up their [hunting] season because of the wolves.”²⁸ In Alaska, laws that protect tribal rights to hunt moose and caribou require that wolves be killed to allow prey numbers to rebound.²⁹ Reduced prey numbers can also reduce the

21. Carina Lundmark & Simon Matti, *Exploring the Prospects for Deliberative Practices as a Conflict-Reducing and Legitimacy-Enhancing Tool: The Case of Swedish Carnivore Management*, 21 WILDLIFE BIOLOGY 147, 152 (2015).

22. See Tammy Gray, *New Mexico Investigator Offers Stern Wolf Warning to Arizona*, TRIB. NEWS (Oct. 29, 2014), <http://tribunenewsnow.com/new-mexico-investigator-offers-stern-wolf-warning-to-arizona/>; see also Isabelle Laporte et al., *Effects of Wolves on Elk and Cattle Behaviors: Implications for Livestock Production and Wolf Conservation*, PLOS ONE, August 2010, at 1.

23. James G. Thompson, *Addressing the Human Dimensions of Wolf Reintroduction: An Example Using Estimates of Livestock Depredation and Costs of Compensation*, 6 SOC’Y & NAT. RESOURCES 165, 172 (1993).

24. Juha Hiedanpää, *Institutional Misfits: Law and Habits in Finnish Wolf Policy*, 18 ECOLOGY & SOC’Y, no. 1, 2013, at 1, 6.

25. Christopher Ketcham, *How to Kill a Wolf—An Undercover Report from the Idaho Coyote and Wolf Derby*, VICE (Mar. 13, 2014), https://www.vice.com/en_us/article/qbee5d/how-to-kill-a-wolf-0000259-v21n3.

26. See Becky Kramer, *Idaho Hunters: Wolves Taking Too Many Elk*, SPOKESMAN-REV. (Mar. 4, 2012), <http://www.spokesman.com/stories/2012/mar/04/idaho-hunters-wolves-taking-too-many-elk/>.

27. *Id.*; see also TOMMY L. BROWN & DANIEL J. DECKER, ALASKA RESIDENTS’ ATTITUDES TOWARD PREDATOR MANAGEMENT STATEWIDE AND IN UNIT 13: EXECUTIVE SUMMARY 5 (2003), <https://ecommons.cornell.edu/bitstream/handle/1813/40386/HDRURReport03-4exec.pdf?sequence=1> (noting that “[p]redation, especially by wolves, was believed to be a cause of prey decline”).

28. Kramer, *supra* note 26.

29. ALASKA STAT. § 16.05.255(e) (2017) (requiring the Board of Game to adopt regulations to “restore the abundance . . . of . . . big game prey populations as necessary to achieve human consumptive use goals”).

value of the hunting rights associated with rural properties.³⁰ According to one estimate, depreciation from reduced prey numbers costs homeowners in Sweden around fifty million euros a year.³¹

In addition, the presence of wolves makes hunting with dogs substantially more difficult. As explained by one Finnish hunter, “The big problem is not that [wolves] eat the moose; the big problem is that they kill the dogs. It’s sometimes very scary when I go to the forest: I don’t know if my dog is going to come out alive.”³² In 2015, fifty hunting dogs were killed by wolves in Finland.³³ Indeed, the Finnish government has cited loss of hunting dogs as a main reason for poaching.³⁴ Further, the challenge wolves pose to hunting with dogs is more determinative than fear in generating hunters’ dislike of wolves.³⁵ This is likely due in part to the cultural importance of hunting in Finland: it acts as a “social glue.”³⁶

Hunting dogs can be worth a substantial amount of money; some dogs killed by wolves have been valued at thirteen thousand dollars.³⁷ Beyond the pure economic loss, hunting dogs often require significant investments of time and emotion.³⁸ Therefore, rural frustration over the deaths of these animals is understandable and gives rise to antipathy toward wolves.

B. Many Rural Communities Experience Deeply Rooted Emotional Fears toward Wolves

According to research by three leading wildlife management experts, “[e]motional responses are at the heart of human attraction to, and conflict over, wildlife. The surprise and/or fear hikers experience when they encounter a wolf in the wild, or the anger that a rancher might express to a wildlife manager over a decision to reintroduce wolves, are emotion-laden events.”³⁹ Animus toward wolves thus goes beyond economic loss. Many in rural communities oppose wolf conservation efforts out of fear: fear for the safety of themselves and their children, fear of the wolf’s brutality, and fear that wolf conservation will shift the balance of power to distant elites. One study found that rural communities used their “anger and fear for children and domestic animals as well as frustration

30. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113.

31. *Id.*

32. Barkham, *supra* note 18.

33. Patrick Barkham, *Are They Still Afraid of the Big Bad Wolf in Finland?*, *GUARDIAN* (Feb. 29, 2016), <https://www.theguardian.com/commentisfree/2016/feb/29/afraid-big-bad-wolf-finland-hunters>.

34. *See id.*

35. *See Bisi*, *supra* note 15, at 774.

36. Barkham, *supra* note 18; *see also* Bisi, *supra* note 15, at 778 (noting the cultural importance of moose hunting).

37. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113.

38. Barkham, *supra* note 18 (noting that compensation “does not bring back a pedigree animal [hunters] may have spent years training”).

39. HUMAN DIMENSIONS OF WILDLIFE MANAGEMENT 49 (Daniel J. Decker et al. eds., 2d ed. 2012).

toward the authorities” to justify illegal killings and hunting violations.⁴⁰ These fears, while not quantifiable like economic loss, are deeply held in these communities. While they may not always be based in fact or reality,⁴¹ failing to address them fails to address the heart of opposition to wolves.

1. Rural Communities Fear for Their Safety and the Safety of Their Families in Sharing the Land with Wolves

Many living in rural areas near wolves fear for the safety of themselves and their families. Nonrabid wolves rarely attack humans unprovoked,⁴² but isolated instances still breed fear. In one study, researchers found only eight reliable recorded instances of healthy wolves killing humans in North America and Eurasia.⁴³ However, most of these attacks were on children,⁴⁴ likely causing disproportionate fear among the communities living near wolves. Similarly, in April of 2000, a wolf in Alaska attacked and repeatedly bit a six-year-old boy.⁴⁵ This incident inspired a study by Alaska’s Department of Fish and Game of wolf-human interactions in the state and Canada.⁴⁶ This nonexhaustive study found thirty-nine instances of aggressive wolves interacting with humans.⁴⁷ Six of those instances resulted in severe bites, and four of those cases involved children.⁴⁸ One study of ranching children in New Mexico found that 87 percent believe that wolves present a danger to them and their families.⁴⁹

In addition to the reality of wolf attacks, cultural perceptions, influenced by fairy tales and oral history, have kept fears of wolf attacks alive.⁵⁰ For instance, in Finland, “old stories about wolves that had killed human infants were told and retold, especially by people living their rural agrarian lives on acknowledged

40. Mari Pohja-Mykrä & Sami Kurki, *Strong Community Support for Illegal Killing Challenges Wolf Management*, 60 EUR. J. WILDLIFE RES. 759, 759 (2014).

41. See, e.g., Andreas S. Chavez et al., *Attitudes of Rural Landowners Toward Wolves in Northwestern Minnesota*, 33 WILDLIFE SOC’Y BULL. 517, 523 (2005) (noting high levels of animus among rural communities living within the wolf range in Minnesota, even when the survey stipulated that “wolves [would] not disturb livestock often”).

42. John D. C. Linnell et al., *The Fear of Wolves: A Review of Wolf Attacks on Humans*, 731 NINA OPPDRAGSMELDING 3, 5 (2002).

43. *Id.* at 6.

44. See *id.* at 5; see also Neda Behdarvand & Mohammad Kaboli, *Characteristics of Gray Wolf Attacks on Humans in an Altered Landscape in the West of Iran*, 20 HUM. DIMENSIONS WILDLIFE 112, 119 (2015) (noting that 62 percent of wolf attacks in the Hamedan province of Iran from 2001 to 2012 victimized children, with five fatalities).

45. MARK E. MCNAY, ALASKA DEP’T OF FISH & GAME WILDLIFE, A CASE HISTORY OF WOLF-HUMAN ENCOUNTERS IN ALASKA AND CANADA 1 (2002).

46. *Id.* at 2.

47. *Id.* at 4.

48. *Id.*

49. Julia Martin, *Inherent Potential for PTSD Among Children Living in the Mexican Gray Wolf Reintroduction Area*, in CATRON CTY. COMM’N, PROBLEM WOLVES IN CATRON COUNTY, NEW MEXICO: A COUNTY IN CRISIS: IMPACTS FROM THE NON-ESSENTIAL MEXICAN WOLF REINTRODUCTION PROGRAM 1, 2 (2012).

50. Barkham, *supra* note 18.

wolf territory.”⁵¹ These stories, centering on harm to children, carry heavy emotional weight. Fear of wolves is increasing as time goes on, and even rural people who do not fear for their own safety are susceptible to fear for their children.⁵² One Finnish woman said that when wolves are in the area, her children “can’t be outside in the daytime alone, and in the darkness, not at all.”⁵³

The solutions implemented to allay these fears demonstrate their significance. In Finland, rural communities have organized costly “wolf taxis” to transport children to school.⁵⁴ These taxis are intended to avoid children walking to school or waiting at remote bus stops.⁵⁵ This is not an isolated concern: in Michigan, a man justified his opposition to the reintroduction of wolves with fears that children would be attacked while waiting for the school bus.⁵⁶ This added cost borne by rural parents to avoid having their children do something as mundane as wait outside for the bus shows how substantial the fear of wolves is.

2. Many in Rural Communities Perceive Wolves as Particularly Brutal

Beyond fears about physical safety and economic loss, many in rural communities are frightened by the perceived brutality of wolves. In an interview, one Montana rancher lamented over the death of one of her cows, “We don’t raise our cattle to be tortured.”⁵⁷ Her aversion to wolves extends beyond economic loss; there is something psychologically damaging in witnessing the effects of the brutality of the wolves. The thought of her cattle being ripped to shreds was “pretty doggone depressing.”⁵⁸ This fear is understandable, given that wolves leave behind “scattered bones, blood, and hide.”⁵⁹

Similarly, a Finnish hunter who lost his dog to wolves bemoaned the brutality of his dog’s death.⁶⁰ He described the wolves as “waiting” for his dog and “invit[ing] the dog to play,” ascribing premeditation and trickery to the wolf, suggesting cruelty beyond normal predation.⁶¹ A few days after his dog’s death, hunters found the dog’s severed head in the snow.⁶² Similarly, a man in Minnesota described finding the remains of his black lab after a wolf attack as a

51. Hiedanpää, *supra* note 24, at 5; *see also* Barkham, *supra* note 18 (“The story of a pair of rogue wolves that killed thirty-five children over eighteen months in the early 1880s is still widely repeated.”).

52. Treves et al., *supra* note 15, at 320.

53. Barkham, *supra* note 18.

54. *Id.*

55. *Id.*

56. THOMAS A. HEBERLEIN, NAVIGATING ENVIRONMENTAL ATTITUDES 22 (2012).

57. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113.

58. *Id.*

59. Mech, *supra* note 7, at 313.

60. Barkham, *supra* note 18.

61. *Id.*

62. *Id.*

“pretty gross sight.”⁶³ These experiences heighten negative attitudes by imprinting visceral, negative images associated with wolves in the minds of rural people.

C. Wolf Conservation Can Upset the Balance of Power in Rural Areas

The debate over wolves requires “questioning economic practices, land use and the allocation of power in the countryside.”⁶⁴ Residents of rural communities often resist the imposition of government land use schemes.⁶⁵ They view wolf reintroduction as “the thin edge of a wedge that could open up debate over land use.”⁶⁶ More broadly, many in rural communities view wolf reintroduction and conservation as “one more example of the loss of control in their lives.”⁶⁷

These impositions are often seen as attempts to change the “traditional role” of rural communities from producing natural resources to providing ecosystem services through protected land and species.⁶⁸ Because this role change is imposed by outside actors, it results in a perceived divide between urban and rural communities, where rural people feel forced to defend their culture and way of life.⁶⁹

Industries in rural areas are similarly concerned about the land use implications of wolf reintroduction. In New Mexico, mining, logging, and hunting interests sided with ranchers and livestock owners because they feared that wolf reintroduction will allow the federal government to control large swaths of land, limiting the use of those areas by industry.⁷⁰ This directly pitted wolves’ survival against economic use of the land, even though industries like logging might benefit from wolf conservation.⁷¹ Instead, there is a concern that steps toward restoring wildlife will be steps toward less logging, mining, and grazing on public lands.⁷² These activities support many in rural communities, and fear of losing control over the land creates anger toward the wolves.

63. Dan Kraker, *Now on Endangered List, Wolves Are Difficult to Control*, MPR NEWS (Apr. 27, 2015), <https://www.mprnews.org/story/2015/04/27/endangered-wolf-control>.

64. Barkham, *supra* note 18.

65. See, e.g., Michael C. Blumm & James A. Fraser, “Coordinating” with the Federal Government: Assessing County Efforts to Control Decisionmaking on Public Lands, 38 PUB. LAND & RESOURCES L. REV. 1, 2–3 (2017) (discussing the Sagebrush Rebellion and Malheur Occupation).

66. Alexander Parson, *Strip Mall Lobos*, in EL LOBO: READINGS ON THE MEXICAN GRAY WOLF 183, 191 (Tom Lynch ed., 2005).

67. RICK BASS, THE NEW WOLVES 83 (1st ed. 1998).

68. Max Eriksson, *Rurality and Collective Attitude Effects on Wolf Policy*, 8 SUSTAINABILITY, no. 8, 2016, at 1–2.

69. *Id.*

70. Parson, *supra* note 66, at 190.

71. *Id.* at 191 (noting that wolf managers might prefer more logging to increase deer populations, increasing the wolves’ food supply).

72. *Id.*

II. WHY DO RURAL ATTITUDES MATTER?

The stakes for including rural communities in wildlife management are high. National Wildlife Federation President Mark Van Putten put it this way: “We cannot restore wildlife unless we look out for the needs of people too.”⁷³ Rural communities are an integral part of the wolf reintroduction and conservation process. Failing to include those impacted by wolf management policies can frustrate conservation objectives, increase anti-government sentiment, and endanger the legitimacy of the law itself.

A. Irate Rural Communities Can Frustrate Conservation Objectives

Political legitimacy—the idea that the government’s actions are right and therefore should be obeyed—depends on a particular policy being “socially acceptable at a local level.”⁷⁴ When political legitimacy does not exist, “resistance in the form of non-compliance and outright sabotage . . . may ensue.”⁷⁵ In this context, this often takes the form of poaching, which decreases wolf populations and ultimately inhibits conservation.

As one researcher noted, “[I]n some areas . . . human intolerance is so great that it has prevented or retarded wolf recolonization.”⁷⁶ For example, some rural people use poison to eliminate wolves. In southern Norway, two wolves were found poisoned in April and July of 2016.⁷⁷ In Bulgaria, poisoning of predators and the resultant secondary poisoning of scavengers was “devastating,” prompting a local nonprofit to begin a livestock compensation program.⁷⁸ A wolf in Colorado was killed with an illegal poison in 2009.⁷⁹

Illegal killing of wolves goes well beyond poisoning, though. The mantra “shoot, shovel, and shut up” encapsulates the feelings of many in rural communities when it comes to wolves. Support for legal killings and regulated hunting is increasing over time, as is the inclination to poach wolves.⁸⁰ In Finland, hunters poach wolves out of frustration over losing their hunting dogs.⁸¹ Between 2007 and 2013, Finnish poachers claimed between 115 and 180

73. BASS, *supra* note 67, at 61.

74. Steve M. Redpath et al., *Don’t Forget to Look Down – Collaborative Approaches to Predator Conservation*, 92 *BIOLOGICAL REVS.* 2157, 2159 (2017).

75. *Id.*

76. Mech, *supra* note 7, at 312.

77. Nina Berglund, *Dead Wolf Found Full of Poison*, *NEWSINENGLISH.NO*, (July 12, 2016), <http://www.newsinenglish.no/2016/07/12/dead-wolf-found-full-of-poison/>.

78. *Livestock Prevention and Compensation Program*, *FUND FOR WILD FLORA & FAUNA*, <http://fwff.org/livestock-prevention-and-compensation-program/> (last visited Mar. 26, 2018).

79. Catherine Tsai, *Investigators: Poison Killed Colorado Wolf*, *CASPER STAR TRIB.* (Jan. 11, 2011), http://trib.com/news/state-and-regional/investigators-poison-killed-colorado-wolf/article_064c1eb3-19b4-5799-b50c-c558272cac55.html.

80. Treves et al., *supra* note 15, at 320.

81. See Barkham, *supra* note 33.

wolves.⁸² During the 2013 hunting season in Slovakia, 150 wolves were killed, even though the limit was 130.⁸³ In Scandinavia, poaching accounted for half of wolf mortality between 1998 and 2009, and two-thirds of poaching went undetected.⁸⁴ Worse, the wolf population would have been almost four times larger had no poaching occurred, demonstrating the devastating impact poaching can have on wolf conservation efforts.⁸⁵

*B. Governments' Failure to Address Rural Concerns Increases
Antigovernment Sentiment and Divisiveness Because It is Inherently Unfair*

Failing to measure and account for rural concerns in wolf management raises questions about basic fairness and the nature of our democracy. While the majority of U.S. and European populations support wolf conservation, “the direct costs of conserving these animals fall on a minority of individuals in rural areas who lose livestock or pets to carnivores.”⁸⁶ Such an imbalance is inherently unfair, leaving the minority to shoulder burdens foisted on them by the majority. Indeed, livestock owners in the western United States “believe predator reintroduction efforts and restrictions on livestock owners’ ability to control problem predators . . . create a responsibility for society to compensate those whose livelihood has been impacted.”⁸⁷

The disproportionate burdens placed on rural communities are especially problematic since those in rural areas are often predisposed to dislike the government. Particularly in the American West, federal control over large areas of land has led to a general distrust and dislike of government control.⁸⁸ That distrust manifests itself in a predilection for anti-establishment political candidates,⁸⁹ as well as a likely aversion to protected predators like wolves. Predisposition to antigovernment sentiment creates a sort of feedback loop in which rural communities dislike the government that supports wolves, so they in

82. *Finland Approves Wolf Hunt in Trial Cull*, GUARDIAN (Jan. 21, 2016), <https://www.theguardian.com/world/2016/jan/21/finland-approves-wolf-hunt-trial-cull-illegal-poaching>.

83. *Wolf Hunting Ban on the Slovak Side of the Eastern Carpathians*, REWILDING EUR. (Jan. 3, 2014), <https://www.rewildingeurope.com/news/wolf-hunting-ban-on-the-slovak-side-of-the-eastern-carpathians/>.

84. Olof Liberg et al., *Shoot, Shovel and Shut Up: Cryptic Poaching Slows Restoration of a Large Carnivore in Europe*, PROC. ROYAL SOC’Y B, Aug. 17, 2011, at 1, 3.

85. *Id.*

86. Naughton-Treves et al., *supra* note 13, at 1501.

87. Univ. of Mont., *Predator Compensation Project*, U.S. DEP’T OF AGRIC., RES., EDUC. & ECON. INFO. SYS., <https://reecis.usda.gov/web/crisprojectpages/0183847-predator-compensation-project.html> (last visited Apr. 26, 2018).

88. See Kim Bellware, *Anti-Government Extremist Groups Are a Uniquely American Problem*, HUFFPOST (Jan. 4, 2016), https://www.huffingtonpost.com/entry/anti-government-patriot-groups_us_5689620ee4b06fa68882a0dd.

89. See, e.g., James Oliphant, *How Trump Crushed Naysayers with a Coalition of the Forgotten*, REUTERS (Nov. 9, 2016), <http://www.reuters.com/article/us-usa-election-trump-analysis/how-trump-crushed-naysayers-with-a-coalition-of-the-forgotten-idUSKBN1341L9> (noting how Donald Trump’s presidential campaign “was a movement driven by discontent”).

turn dislike the wolves. The wolves then sow fear and economic loss, leading them to not only dislike the wolves more, but also the government because they believe it forced the wolves upon them.

Further, those making the decisions are often perceived as uninformed about the lives of rural communities, if not actually so. One New Mexico rancher put it this way:

People in the East view this part of the country as empty public lands and think it should stay that way. They don't have a clue what it's like. All this is done on a whim. Why should ranchers be prepared to take losses just so some New York City guy can sleep well knowing there's wolves in the wild?⁹⁰

This reference to New York City demonstrates the perceived divide between urban and rural communities. The rancher likely chose New York City for its symbolism as an urban center, to drive home the otherness of “[p]eople in the East.” Another rancher in New Mexico also invoked New York when expressing frustration about wolves: “Take the wolves and plant ‘em in Central Park, ‘cause *they* impose it on us to have these goddamn wolves! . . . [T]hese tree huggers don't know what. I want wolves to eat them goddamn tree huggers. Maybe they'll learn something!”⁹¹

Similar sentiments were expressed by a Finnish hunter:

Th[e] discussion is dominated by people who have never seen a wolf or lived in a wolf area. The matter should be decided in the areas where it takes place, and not in Helsinki. . . . And the problem is, some things are not decided in Helsinki but in Brussels, where they understand it even less.⁹²

This hunter's concern demonstrates the additional complications posed by membership in the European Union. Not only are conservation decisions made at the national level, they are also made at the international level, removing decision makers even further from impacted rural communities.

These sentiments may be exacerbated by the fact that wolf conservation inspires a particular kind of NIMBYism. One Wisconsin survey found that only 8 percent of those living outside wolf range supported allowing wolves to live in areas adjacent to suburban developments.⁹³ So while urban communities generally support wolf conservation, it seems that this is in part due to the reality that they are not the ones who bear the costs of such conservation.

Rural communities are frustrated by distant elites who do not seem to share or understand their concerns about wolves. That frustration, borne of perceived unfairness, endangers the wolves themselves. The facts of *New Mexico Department of Game and Fish v. United States Fish and Wildlife Service* provide

90. Parson, *supra* note 66, at 193–94.

91. Ketcham, *supra* note 25.

92. Barkham, *supra* note 18.

93. WIS. DEP'T OF NAT. RES., PUBLIC ATTITUDES TOWARDS WOLVES AND WOLF MANAGEMENT IN WISCONSIN 169 (2004), http://dnr.wi.gov/topic/wildlifehabitat/wolf/documents/wolfattitude_surveyreportdraft.pdf.

one example.⁹⁴ By refusing to allow the federal government to import Mexican gray wolves into the state, New Mexico undermined the conservation objectives of FWS. In addition, New Mexico's suit caused the federal government to devote additional time and resources on litigation defending wolf conservation policies. New Mexico's arguments were rooted in control over the land by local decision makers, a direct response to fears that distant elites were usurping local control.⁹⁵

Frustration with distant elites can even more directly imperil wolves. Illegal killings are often justified based on distrust of wolf managers. In some communities in Finland, "hunting violators are seen as a kind of Robin Hood . . . and their acts are considered acts of justice, that is, the local people against the central administration."⁹⁶ In the United States, some ranchers are "fed up with the government telling them what to do, fed up with endangered species."⁹⁷ These frustrated people see wolf reintroduction as a "government taking [of] private property."⁹⁸ As a result, "You[] [will] see some file lawsuits over the wolf reintroduction; you[] [will] see some start to shoot."⁹⁹

While representative democracies empower majorities, they are also intended to protect the rights of minorities.¹⁰⁰ By showing rural communities that decision makers care about and will respond to their concerns, governments and NGOs can improve their relationships with these communities while promoting basic fairness and ensuring the success of wolf reintroduction, conservation, and coexistence programs.

C. Failing to Address Rural Concerns Will Imperil the Law Itself

When rural communities do not feel that those in power are responsive to their concerns, they will demand either a change in position or in elected officials. These appeals are often highly public and sensational. For instance, in 2014, Tuscan farmers dumped wolf carcasses in town centers to protest the increase in wolf populations.¹⁰¹ Representatives in state and federal governments are therefore forced to take anticonservation stances in districts where constituents feel alienated by the current conservation and management scheme. While rural communities would likely be better served in the long run by compromise conservation schemes that work for wolves and people alike, the

94. See *N.M. Dep't of Game & Fish v. U.S. Dep't of the Interior*, 854 F.3d 1236, 1240–44 (10th Cir. 2017).

95. See *First Amended Complaint for Declaratory Judgement and Injunctive Relief at 2–3*, *N.M. Dep't of Game & Fish v. U.S. Dep't of the Interior*, No. 1:16-cv-00462-WJ-KBM (D.N.M. Aug. 26, 2016), ECF No. 52 ("Defendants' actions interfere with the authority of the State of New Mexico as sovereign to exercise those powers traditionally within its realm and reserved to it by the U.S. Constitution.").

96. Pohja-Mykrä & Kurki, *supra* note 40, at 769.

97. Parson, *supra* note 66, at 194.

98. *Id.*

99. *Id.*

100. JOHN STUART MILL, *CONSIDERATIONS ON REPRESENTATIVE GOVERNMENT* 162–63 (Floating Press 2009) (1861).

101. Barkham, *supra* note 18.

political system encourages a more radical response to the passions of the electorate. Where anticonservation sentiments are strong enough, politicians perceived as proconservation may be in danger of losing their seats. That political pressure can endanger environmental laws, agencies, and programs. Where elected officials feel that their constituents do not support these programs, those officials will not fight to preserve them. As one author put it, “[i]t’s an amazing aspect of our democracy . . . how the furious passions of so few can . . . influence the law based solely upon the power of their anger or fear or, in some instances, hatred.”¹⁰²

In addition, when larger governmental units, like the federal government, ignore issues raised by smaller units, like state and local governments, it appears as though the larger units are dismissing rural communities and their concerns. Smaller governmental units tend to more closely reflect the views of their constituents, since each vote in a smaller unit carries more weight in choosing representatives.¹⁰³ These governmental units, therefore, are more representative of rural concerns in the management of wolves. By failing to account for the issues raised by smaller governmental units, larger governmental units effectively disregard rural communities.

This may lead smaller governmental units to act in contravention of the law. For instance, the European Commission ruled that Finland’s wolf hunting program is unlawful under the Habitats Directive, a European Union Commission edict that protects wild flora and fauna and their natural habitats.¹⁰⁴ The hunting program allows for the killing of some number of wolves, rather than permits for the killing of particular problem wolves.¹⁰⁵ While Finland’s wolf population has continued to increase, the court noted that without the legal killings, the population would have presumably improved even more.¹⁰⁶ Since Finland did not provide a scientific basis for its hunting program, this speculative harm was enough for the court to find that the shootings were detrimental to the Finnish wolf population.¹⁰⁷ While the Commission dropped a more recent case related to Finland’s wolf culls,¹⁰⁸ the Commission filed other cases related to nationally sanctioned wolf hunting. For example, the Commission has instituted proceedings against Sweden twice since 2010—first for contravention of a European Union natural resources directive, and later for access to justice and

102. BASS, *supra* note 67, at 78.

103. See MILL, *supra* note 100, at 336 (“[L]ocal opinion necessarily acts far more forcibly upon purely local administrators. . . . [T]heir authority itself depends, by supposition, on the will of the local public.”).

104. Opinion of the Advocate General, Case C-342/05, *Comm’n v. Finland*, 2007 E.C.R. I-4713, I-4729.

105. See *id.* at I-4725.

106. *Id.* at I-4727.

107. *Id.*

108. *EU Drops Complaint Against Finnish Wolf Hunting*, YLE UUTISET (Mar. 4, 2008), https://yle.fi/uutiset/osasto/news/eu_drops_complaint_against_finnish_wolf_hunting/5829630.

administrative review.¹⁰⁹ Despite these proceedings, Sweden has continued its wolf culls.¹¹⁰ Sweden and Finland thus present examples of smaller governmental units acting in contravention of larger governments' policies.

Finally, failure to address the concerns of rural communities can lead to a breakdown of law and order more generally. For example, Finnish conservationists aiming to sabotage wolf hunters set off fireworks, vandalized trail cameras, and burned a hunting shelter to the ground.¹¹¹ In 2015, French farmers kidnapped national park staff to demonstrate their frustration with wolf depredation on livestock.¹¹² The kidnappers hoped to convince the government to allow more wolf hunting.¹¹³ In Washington, the killing of a wolf pack to protect cattle has sparked death threats.¹¹⁴ The above incidents demonstrate that consternation with wolf conservation and management policies can lead rural communities to flout laws beyond those related specifically to wolves.

III. WHILE GOVERNMENTS AND NGOs ARE IMPLEMENTING PROGRAMS TO ADDRESS RURAL CONCERNS, THERE IS MORE TO BE DONE TO IMPROVE RURAL COMMUNITIES' ATTITUDES TOWARD WOLVES

Currently, both governments and NGOs implement programs to increase rural tolerance for wolves, but they tend to ignore at least some of the "reasons behind communities' reactions or negative feelings."¹¹⁵ Those programs include culling schemes, compensation programs, wolf advisory groups, and coexistence education programs. These programs, though, are often not evaluated based on how they impact rural attitudes, and in some cases can "increase the populace's feelings of insecurity, helplessness, and anger."¹¹⁶ To better understand those impacts, the administrators of these programs should survey impacted communities. This data could then be used to modify programs to improve rural attitudes while also maintaining rigorous conservation objectives.

109. Comm. on Petitions, Notice to Members: Petition No. 0011/2015 Johanna Parikka Altenstedt (Swedish) on the Steps Taken by the Commission in a Case Concerning Wolf Hunting in Sweden, EUR. PARL. DOC., at 1 (July 31, 2017), <http://www.europarl.europa.eu/sides/getDoc.do?type=COMPARL&reference=PE-575.008&format=PDF&language=EN&secondRef=03>.

110. See Caroline Mortimer, *Swedish Hunters to Begin Mass Slaughter of Wolves Despite Legal Challenges*, INDEPENDENT (Jan. 3, 2016), <http://www.independent.co.uk/news/world/europe/swedish-hunters-to-begin-mass-slaughter-of-wolves-despite-legal-challenges-a6794841.html>.

111. Barkham, *supra* note 18.

112. *France: Farmers Kidnap Park Chiefs Over Wolf Attacks*, BBC (Sept. 2, 2015), <http://www.bbc.com/news/blogs-news-from-elsewhere-34131991>.

113. *Id.*

114. Lynda V. Mapes, *Death Threats, New Conflicts Over Killing of Wolves*, SEATTLE TIMES (Aug. 30, 2016), <https://www.seattletimes.com/seattle-news/northwest/death-threats-new-conflicts-over-killing-of-wolves/>.

115. Hiedenpää, *supra* note 24, at 7.

116. *Id.*

A. *Current NGO and Government Programs Are Inadequate to Address Rural Concerns*

While conservation organizations recognize the importance of engaging rural communities in wolf conservation,¹¹⁷ current schemes to measure and change rural attitudes have largely failed to meaningfully shift those attitudes. Culling programs are often seen as too restrictive by rural communities, but too lenient by conservationists. Compensation schemes generally do not provide large enough payments in the eyes of ranchers and do not address many of the deeply rooted emotional concerns of rural communities. Wolf advisory groups are often seen as illegitimate and ineffective. Coexistence programs fail to measure and advertise their impact on rural attitudes. In these ways, current wolf management schemes are failing to adequately address and prioritize rural concerns, which only serves to deepen and entrench the divide between managers and rural communities. This failure is likely a result of deep commitment to conservation; after all, giving too much weight to rural concerns can itself frustrate conservation objectives.¹¹⁸ Even so, the shortcomings of these programs must be addressed to effectively engage rural communities as partners in the conservation process.

1. *Rural Communities Often Perceive Lawful Killings as Inadequate to Address Wolf Populations*

First, many in rural communities feel that legal killing schemes, especially hunts, do not remove enough wolves. French farmers have demanded that the government shoot more wolves.¹¹⁹ In Finland, hunters are frustrated by restrictions on killing wolves, especially because just across the border in Russia, hunters are rewarded with a bounty for each wolf they kill.¹²⁰ Poaching expresses similar dissatisfaction, with hunters taking more wolves than is legally allowed to control their numbers.

Second, many in rural communities feel that the rules for killing “problem” wolves are too restrictive. A private citizen may kill a wolf in self-defense only if the killing is reported after and the wolf is retained, disposed of, or salvaged in accordance with FWS’s direction.¹²¹ That reporting can be a drawn-out process.

117. See, e.g., *Helping Ranchers Coexist with Wolves*, DEFENDERS OF WILDLIFE, <http://www.defenders.org/gray-wolf/helping-ranchers-coexist-wolves> (last visited Mar. 26, 2018) (acknowledging conflicts between wolves and ranchers and the takings of wolves that can result).

118. See, e.g., Cally Carswell, *Endangered U.S. Wolf Denied New Habitat, As Critics Charge that Politics Trumped Science*, SCIENCE (Sept. 27, 2017), http://www.sciencemag.org/news/2017/09/endangered-us-wolf-denied-new-habitat-critics-charge-politics-trumpedscience?utm_campaign=news_daily_2017-09-28&et rid=56179056&et cid=1570925 (noting that a new Mexican wolf recovery plan has been criticized by scientists as “an absolute waste of time” as it gave in to too many rural demands).

119. Barkham, *supra* note 18.

120. See *id.* (“Russian authorities reward hunters for killing some of their 50,000 wolves . . . [I]t is illogical to have two such different approaches, when wolves move freely between the countries.”).

121. 50 C.F.R. § 17.40(d)(2)(i) (2017).

In one incident in Arizona, a man who killed a wolf ostensibly in defense of his family was questioned about the incident by FWS for six weeks.¹²² Such rigorous follow-up procedures, while arguably necessary, amplify the anger folks feel after a dangerous encounter with a wolf.

In addition, lawful killing schemes, supposedly introduced to reduce poaching,¹²³ may actually increase the rate of unlawful killings. While many government agencies rely on the idea that allowing more legal killings will reduce poaching, these claims are often made without quantitative evidence.¹²⁴ One study of culls in Wisconsin and Michigan found that more liberal wolf culls were associated with decreased population growth rates independent of the number of wolves culled.¹²⁵ While the study's model did not include poaching as a variable, it is the most obvious explanation for the changes in population growth rates.¹²⁶ A longitudinal study of Wisconsin attitudes found a regulated public hunt resulted in a decline in tolerance for wolves among men familiar with hunting in the Wisconsin wolves' range.¹²⁷ The authors further explained that "[l]iberalizing wolf culling may have sent a negative message about the value of wolves or that poaching prohibitions would not be enforced."¹²⁸

However, one study of wolf killings in Sweden found that wolves were more likely to be poached within a national park, where hunting was prohibited, than in areas outside the park where hunting was permitted.¹²⁹ The authors attributed this result to the remoteness and lack of enforcement presences within the parks, suggesting that hunting prohibitions or lack thereof may not be determinative.¹³⁰ However, the impact of legal killings on rural attitudes toward wolves may be negative, frustrating the intent of the agencies implementing the culls. This clearly demonstrates the need for longitudinal studies on the impact of government policies, especially policies as controversial as legal wolf hunts.

122. J. Zane Walley, *Caught Twixt Beasts and Bureaucrats: New Rules from a Softer Society, Far Removed from the Land*, in *EL LOBO: READINGS ON THE MEXICAN GRAY WOLF*, *supra* note at 66, at 176, 179.

123. See, e.g., Barkham, *supra* note 33 (noting that the Finnish government introduced a cull to stop poaching by hunters frustrated by losing their dogs to wolves).

124. Guillaume Chapron & Adrian Treves, *Blood Does Not Buy Goodwill: Allowing Culling Increases Poaching of a Large Carnivore*, *PROC. ROYAL SOC'Y B*, May 11, 2016, at 1–2.

125. *Id.* at 4–5.

126. *Id.* at 5 (the authors of the study ruled out alternative plausible explanations, such as negative density dependence, super-additive mortality, wolf emigration to neighboring states, natural fluctuations in population, or monitoring quality).

127. *Id.*

128. *Id.*

129. Geir Rune Rauset et al., *National Parks in Northern Sweden as Refuges for Illegal Killing of Large Carnivores*, 9 *CONSERVATION LETTERS* 334, 337 (2015).

130. See *id.* at 338.

2. *Compensation Schemes Are Inadequate to Change Rural Attitudes Because They Often Undercompensate and Address Only Economic Concerns*

Rural communities who have access to compensation programs for lost livestock and hunting animals often feel that the compensation provided is inadequate.¹³¹ In one study, half of the respondents said that compensation amounts were unable to cover their total losses.¹³² The amount of compensation often does not account for specially bred or “registered cattle.”¹³³ This may result in underpayments of up to \$20,000 per cow.¹³⁴ In addition, programs that compensate for the loss of hunting animals fail to account for the time and emotion invested in training and raising those animals.¹³⁵ Further, compensation programs often take a long time to pay out. In Finland, compensation for a hunting dog can take up to eighteen months.¹³⁶

Some ranchers in the United States feel it is too difficult to receive compensation because they must prove that a wolf killed their livestock.¹³⁷ One rancher noted, “When you come up on a carcass, eaten by wolves, then coyotes, then buzzards, how do you prove wolf sign?”¹³⁸ Because of this inherent difficulty, one rancher estimated that she was compensated for only 10 percent of her \$42,000 worth of lost cattle.¹³⁹ One study estimates that for every confirmed wolf kill, there are eight actual losses, suggesting that confirmed wolf kills are only a fraction of the cattle lost to wolf depredation.¹⁴⁰ Further, compensation programs do not account for deaths and reduced production caused by wolf-induced stress.¹⁴¹

The impact of compensation programs is mixed at best. One study found that people who had been compensated for livestock losses were more likely to favor reducing the wolf population than those who had lost an animal to wolf predation without compensation.¹⁴² In addition, those who had been compensated were more likely to say they would shoot a wolf if they saw one

131. Naughton-Treves et al., *supra* note 13, at 1509.

132. See Larry W. Van Tassell et al., *Depredation Claim Settlements in Wyoming*, 27 WILDLIFE SOC’Y BULL. 479, 484 (1999).

133. Parson, *supra* note 66, at 192.

134. *Id.*

135. Barkham, *supra* note 18 (noting that while hunters are compensated for dogs killed by wolves, money does not “bring back a pedigree animal they may have spent years training”).

136. *Id.*

137. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113; see also Barkham, *supra* note 18 (noting that a description of the death of a hunting dog sounded “like the abduction of a child”).

138. Parson, *supra* note 66, at 192.

139. *The Wolf Returns: Call of the Wild*, *supra* note 9, at 113.

140. JOHN WILLIAMS, ESTIMATES OF ECONOMIC LOSSES TO STOCK GROWERS DUE TO THE PRESENCE OF WOLVES IN NORTH EASTERN OREGON 2 (2015), http://extension.oregonstate.edu/wallowa/sites/default/files/estimates_of_economic_losses_to_stock_growers_due_to_the_presence_of_wolves_in_north_eastern_oregon_5_13_16.pdf.

141. Gray, *supra* note 22.

142. Naughton-Treves et al., *supra* note 13, at 1505.

while hunting deer, than those who had not been compensated for their losses.¹⁴³ Another study found that livestock owners who approved of compensation “tended to characterize it as a means of making losses (rather than predators themselves) more acceptable.”¹⁴⁴ So while compensation programs may be useful for distributing the costs of wolf depredation, they do not necessarily improve the attitudes of rural communities toward wolves.

In addition, some worry that compensation programs might remove the incentive for farmers to practice predator-friendly husbandry, which requires managing livestock in ways that deter predators.¹⁴⁵ Some strategies that might be used to deter predators include using guard dogs, installing electric fencing, and increasing human presence around flocks.¹⁴⁶ While protecting flocks may seem intuitive, ranchers may be unlikely to implement these practices if they feel it is more profitable to recover under compensation programs.

Finally, one study found that of those surveyed who reported losing livestock to wolf depredation, people with more land, more cattle, and higher formal education were more likely to register an official complaint than others who experienced losses.¹⁴⁷ Of the 157 respondents in the study who had lost livestock to wolves, 107 registered complaints.¹⁴⁸ This means that compensation programs are redistributing costs, but not fully. Those who hold economic privilege and status reap the rewards of compensation programs, while smaller farms do not. While compensation programs are open to all, the data shows that they are unequally utilized. This incomplete redistribution of resources may amplify existing frustrations with wolf management.

Beyond economic frustrations, compensation schemes are theoretically flawed because they do not address any of the deeply rooted emotional fears discussed in Part II. Worse, by quantifying the loss experienced by rural communities strictly in terms of dollars, governments and NGOs are signaling that they do not fully understand rural communities’ antipathy toward wolves. Compensation may even be perceived as an attempt to buy off rural communities, suggesting that their deeply held values and fears can be cast aside for a nominal fee.¹⁴⁹ This only serves to deepen the divide between those who support wolf conservation and those who do not.

143. *Id.*

144. Univ. of Mont., *supra* note 87.

145. Naughton-Treves et al., *supra* note 13, at 1501.

146. *See, e.g.*, DEFS. OF WILDLIFE, LIVESTOCK AND WOLVES: A GUIDE TO NONLETHAL TOOLS AND METHODS TO REDUCE CONFLICTS 6–13 (2016), http://www.defenders.org/sites/default/files/publications/livestock_and_wolves.pdf.

147. Naughton-Treves et al., *supra* note 13, at 1505.

148. *Id.*

149. *See, e.g.*, Karen Weise, *Delicate Dances with Conservationists Who Save Wolves in Washington State*, BLOOMBERG BUSINESSWEEK (Dec. 22, 2016), <https://www.bloomberg.com/news/features/2016-12-22/delicate-dances-with-conservationists-who-save-wolves-in-washington-state> (“In our minds, compensation is the same as compromise . . . [W]e [would] be selling our morals.”).

While compensation programs are likely necessary to address the economic concerns of rural communities, they are not enough to change rural attitudes, and their impact should be carefully studied to determine when and where they are most valuable.

3. Collaborative Processes like Wolf Advisory Groups, While Sound in Theory, Often Fail to Realize Their Potential

Collaborative processes in wildlife management can reduce conflict among competing interest groups, and lead to greater tolerance for opposing views and a “broadened sense of collective, rather than individual, interests.”¹⁵⁰ This, in turn, can increase the legitimacy of the wolf management policies produced by community collaboration.¹⁵¹ Collaborative wolf management has been adopted in many areas impacted by wolves, though little data on its effectiveness has been collected.

In Sweden, large carnivores, including wolves, are managed locally by Wildlife Management Delegations (WMDs).¹⁵² These delegations are composed of politicians, conservationists, and representatives of farmers and hunting managers.¹⁵³ Delegations are responsible for managing the hunting of large carnivores, ungulate herds, and compensation programs.¹⁵⁴ WMDs exist to address legitimacy concerns with top-down carnivore management, but they have so far been largely unsuccessful at accomplishing this goal.¹⁵⁵ One study of three newly established Swedish WMDs found that 60 percent of participants were hunters, and that hunters were more likely to view large carnivores negatively.¹⁵⁶ While most participants believed WMDs could solve the problem of contentious wolf conservation, most did not believe that their organization’s stance would change over time.¹⁵⁷ This suggests that while many favor WMDs as a management strategy, they are not seen as effective in changing stakeholders’ views. Even so, a majority of respondents said their participation in a WMD was likely to change their own views.¹⁵⁸ Therefore, while collaborative management may not be a good strategy for changing the entrenched interests of organizations, it is likely a better strategy than top-down management because of the potential to change the individual views of participants.

150. Lundmark & Matti, *supra* note 21, at 147.

151. *Id.*

152. *Id.* at 148.

153. *Id.*

154. *Id.*

155. *Id.* at 148–49 (noting that the management system has not contributed to lessening inter-stakeholder conflicts or the legitimacy deficits of the policy itself).

156. *Id.* at 153.

157. *Id.* at 154 tbl.3.

158. *Id.*

California assembled a Wolf Stakeholder Working Group after the arrival of wandering wolf OR-7 in late 2011 to plan for the possibility of future wolves within the state.¹⁵⁹ The working group brought together landowners, farmers, ranchers, conservation groups, and government agencies to develop plans for future action.¹⁶⁰ The group included representatives from ranching and farming organizations, and seemed to solicit honest feedback from those representatives.¹⁶¹ In addition, the group evaluated the practices of wolf advisory groups from other states, attempting to avoid some of the mistakes made by groups in Oregon and Washington.¹⁶² For instance, the group noted that Washington's advisory councils have not included local groups and have therefore had limited effectiveness.¹⁶³ The group also noted that while livestock producers should be encouraged to take protective measures, such suggestions would need to be flexible and presented in a nondemanding way.¹⁶⁴ Lastly, the final plan developed by the working group calls for local and statewide wolf advisory committees to include livestock producers as members.¹⁶⁵

In these ways, the California Stakeholder Working Group acknowledged and considered the concerns of rural communities. Though the statewide and local advisory committees have only been in place for one year, the Stakeholder Working Group can be a model for other states to include both producers and conservationists in the wolf management process. There is a danger in favoring one side over the other: Washington brought in a mediator to facilitate their wolf advisory group meetings due to intractable acrimony,¹⁶⁶ and working groups in Wisconsin present an example of how failing to include conservation groups can incite questions about the working group's legitimacy.¹⁶⁷ Even though California's model is theoretically sound, there is insufficient data to evaluate its effectiveness in both protecting wolves and shifting rural attitudes. As time passes, and wolves potentially reenter California, it will be important to evaluate how well this group—and others like it—involve rural stakeholders and work to improve their attitudes toward wolves.

159. See CAL. DEP'T OF FISH & GAME, MEETING REPORT: MULTI-STAKEHOLDER MEETING ON WOLVES IN CALIFORNIA 3 (2012), <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=75637&inline=1>.

160. See *id.* at 10.

161. See, e.g., *id.* at 10, 12 (noting that California Department of Fish and Wildlife could have provided more information to producers, and better communication and coordination with local landowners).

162. See CAL. DEP'T OF FISH & GAME, MEETING REPORT: STAKEHOLDER WORKING GROUP MEETING ON WOLVES IN CALIFORNIA 7 (2014), <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=105453&inline>.

163. *Id.*

164. *Id.* at 7–8.

165. *Id.* at 17.

166. Weise, *supra* note 149.

167. See, e.g., Shirley Clements, *Column: Wolf Committee Filled with Wrong People*, POST-CRESCENT (Nov. 4, 2014), <http://www.postcrescent.com/story/sports/outdoors/hunting/2014/11/04/opinion-wolf-committee-wisconsin/18473745/>.

4. *NGOs Are Evaluating Coexistence Programs Based on Animal Counts Rather Than on Changing Rural Attitudes*

Currently, many government and NGO-run coexistence programs measure success in terms of animal counts. These coexistence programs often consist of workshops and educational programs designed to encourage farmers and ranchers to adopt wolf-friendly livestock practices. For example, in the Wood River Valley of central Idaho, Defenders of Wildlife (Defenders) has worked with sheep herders to reduce the risk of wolf depredation by using guard dogs, portable fencing, starter pistols, air horns, and flashlights to dissuade wolves, and by removing livestock carcasses to avoid attracting wolves in the first place.¹⁶⁸ The Defenders program is impressive. It has, by Defenders' count, protected 10,000 to 22,000 sheep without having to kill a single wolf.¹⁶⁹ In the first seven years of the program, wolves killed only five sheep per year in the program's area of operation.¹⁷⁰ However, Defenders has largely measured its impact in terms of animals saved, rather than evaluating how its programs influence rural attitudes toward wolves.

Coexistence programs do not always account for the attitudes of ranchers and farmers toward the interventions they suggest. For instance, a recent op-ed in a local Oregon paper noted that many ranchers believe electric fencing is "just impractical" for large ranches because it is very difficult to keep the fencing electrified.¹⁷¹ Ranchers will not implement practices they do not believe will work, so electric fencing will only be useful if ranchers can be convinced of its worth. For a program with a wide range of interventions like Defenders', it is imperative to understand the attitudes of local communities—both toward wolves and the interventions they encourage. These programs will thus be able to focus their limited resources on the interventions that are most likely to be adopted, which may include directing resources to convince local residents of their effectiveness.

Further, focusing on animal counts fails to center the experience of rural communities, missing an opportunity to amplify their voices and empower them as part of the conservation process. Currently, even if pro-wolf organizations are measuring rural attitudes, they fail to advertise their successes in these terms. Defenders' literature, for instance, touts the success of their Idaho programs in terms of how few wolves and sheep have been lost under their programs.¹⁷² While these animal count metrics are important to demonstrate the success of nonlethal methods of wolf management, centering the conversation on these metrics misses the deeper, emotional concerns rural communities experience,

168. DEFS. OF WILDLIFE, *supra* note 146, at 10–14.

169. *Id.* at 14.

170. *Id.*

171. Mack Birkmaier, *Wolf Attack: A Cow Man's Worst Nightmare*, WALLOWA CTY. CHIEFTAIN (Mar. 17, 2015), <http://www.wallowa.com/wc/editorials/20150317/guest-column-wolf-attack-a-cow-mans-worst-nightmare>.

172. See *Helping Ranchers Coexist with Wolves*, *supra* note 117.

which alienates them and amplifies the loss of agency these communities already feel.

In addition, this focus on animal losses trickles down to media reports on these programs. For example, a *New York Times* article on Defenders' Idaho program cited its success in terms of reducing animal loss.¹⁷³ More frustratingly, the article failed to interview a single rancher, farmer, or other rural resident impacted by the program. Instead, the article claimed that “[s]upport for the coexistence project is growing,” but supported that claim with evidence of large grants from Toyota and the National Audubon Society, rather than with support from local residents or groups.¹⁷⁴ This sort of reporting only serves to reinforce the idea that rural voices do not matter and deepens the divide between rural and urban communities. By changing the conversation to include rural voices and concerns, NGOs and governments can show media outlets how to cover their programs in ways that will both endear themselves to and empower these communities.

B. In Order to Change Rural Attitudes toward Wolves, Wildlife Managers Must First Survey Impacted Communities to Determine the Most Effective Coexistence Strategies

Some of the above programs have theoretical flaws, but limited data on their effectiveness makes it difficult to fully evaluate them. Therefore, the first step in improving rural attitudes is measuring the impact of existing programs to understand which work and why. Conflict over wolves is unlikely to ever be fully eradicated, regardless of the coexistence efforts of governments and nonprofit organizations, but it can be minimized. The use of survey data to inform the policies and programs implemented has several advantages over current practices. First, the most effective strategies will get the most resources, so the value of each dollar spent on these programs will have a greater impact. Second, geographically specific survey data will allow managers to adopt the policies that work best in their particular location. Third, the strategic implementation of strategies positively impacting rural attitudes will signal to rural communities that their concerns matter. The helplessness that rural communities feel regarding their interactions with wolves no doubt stems in part from feeling like they are not being heard by those who make wolf management decisions. While surveys themselves should alleviate this somewhat, the adoption of programs that work well for both rural communities and wolves is a more powerful way to demonstrate that rural people matter. More importantly, such programs situate rural communities as partners in wolf conservation, rather than opponents to it.

By measuring the impact of programs designed to assuage rural concerns and by critically evaluating their effectiveness, wolf advocates can improve their

173. Matt Furber, *Guarding the Sheep to Save the Wolves*, N.Y. TIMES (Oct. 10, 2012), https://green.blogs.nytimes.com/2012/10/10/guarding-the-sheep-to-save-the-wolves/?_r=1.

174. *Id.*

relationships with rural communities and their chances of conservation success. Surveys are likely the most feasible way to do this, though they are not without their shortcomings.¹⁷⁵ Lisa Naughton-Treves's work demonstrates the enormous value of surveys, especially in evaluating compensation schemes. Such surveys are vital in determining how compensation schemes fit into a robust, multifaceted strategy for improving rural attitudes toward wolves. Any survey created and administered for this purpose should survey those who live in areas with wolves and should include those who have participated in government or NGO-sponsored efforts to promote coexistence with wolves. The reported results on these surveys should also break respondents up into urban and rural populations to show how attitudes vary based on proximity to wolves because conflating urban and rural attitudes can crowd out rural concerns.

In addition, these surveys will be most useful if they are longitudinal and measure attitudes over time. This will allow policy makers and sponsors of coexistence programs to measure the impact of their programs on rural attitudes. In addition, intentions to behave in a particular way "can be predicted with high accuracy from attitudes toward the behavior."¹⁷⁶ Therefore, attitude surveys that include questions about whether the respondent supports poaching of wolves can be useful in determining how dangerous a particular populated area would be for reintroduced or dispersed wolves. This is particularly important given the divergent data on how hunts and compensation programs impact the rate of poaching.

While scholars continue to explore varying methods for achieving predictive validity in attitude surveys,¹⁷⁷ there is value in surveying beyond predicting the actions of rural communities. By measuring their impact based on these surveys, governments and NGOs will be able to better tailor their programs to improve rural attitudes toward wolves, and thereby improve the chances of achieving their ultimate conservation objectives. Second, measuring attitudes can build trust between rural communities and wolf advocates. The act of surveying itself demonstrates to rural communities that wildlife managers and NGOs care about their concerns regarding wolf conservation. This can serve to lessen the distrust and *us versus them* mentality that has come to define so much of the debate around wolves.

175. A full analysis of the use of surveys is outside the scope of this paper. For an example of conceptual modeling of attitude data, see Alan D. Bright & Michael J. Manfredo, *A Conceptual Model of Attitudes Toward Natural Resource Issues: A Case Study of Wolf Reintroduction*, 1 HUM. DIMENSIONS WILDLIFE 1, 5-7 (1996).

176. Icek Ajzen, *The Theory of Planned Behavior*, 50 ORGANIZATIONAL BEHAV. & HUM. DECISION PROCESSES 179, 179 (1991).

177. See Michael J. Manfredo et al., *Public Acceptance of Mountain Lion Management: A Case Study of Denver, Colorado, and Nearby Foothills Areas*, 26 WILDLIFE SOC'Y BULL. 964, 965 (1998) ("A basic challenge in human dimensions research is to measure attitudes toward a range of management scenarios which are specific enough to ensure predictive validity.").

C. *Wildlife Managers Should Use Survey Data to Modify Their Community Engagement Efforts to More Effectively Impact Rural Attitudes*

After survey data has been collected, wolf managers and conservation organizations should adopt an adaptive approach: allocating resources to programs that are most effective at achieving conservation goals and encouraging tolerance for wolves in rural communities. The most likely outcome of these surveys will be that none of the strategies outlined above were sufficient on their own. As noted above, each type of program has theoretical or empirical flaws, or both, and no program is a perfect strategy for both conserving wolves and fully placating rural communities. Therefore, it is likely that some combination of the above strategies and others not yet tried will be required in persuading rural people to welcome wolf conservation in their communities.

CONCLUSION

Rural communities are important allies in the fight for wolf conservation. Without their support, wildlife managers in Europe and the United States will face an uphill battle, and wolves will struggle to survive. Current attempts to address rural concerns are a start but are not enough to ensure rural support for wolf conservation. Governments and NGOs must measure the impact their programs have on rural attitudes to understand what works and what does not, bearing in mind their ultimate conservation objectives.

Surveying rural attitudes is not, on its own, enough to bridge the divide between rural communities and wolf advocates. Governments and NGOs may need to implement new programs or strengthen old ones. For instance, conditioning compensation on attendance at workshops on predator-friendly husbandry is one potential approach to ensure that compensation programs do not encourage risky livestock practices. These organizations may also need to combine strategies to address the varied concerns of rural populations. More importantly, though, conservation managers and advocates will need to respond to the results of attitude surveys, changing their practices to incorporate rural concerns without sacrificing overall conservation goals. This is not a challenge easily met. The first step should be to gather information and work to repair and rebuild relationships with rural communities. As one Washington advisory group member put it, “[y]ou can be the most technically proficient and well-financed and well-intentioned,” but without compassion for the rural folks who live with wolves, “it w[ill not] go anywhere.”¹⁷⁸

178. Weise, *supra* note 149.