

Gray Wolf Overexploitation in the United States: Protection of a Public Good

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HLSP-527

Policy Analysis and Evaluation

Table of Contents

● Title Page	Page 1
● Table of Contents	Page 2
● Introduction	Pages 3 - 4
● The American Gray Wolf.....	Pages 4 - 7
● Public Goods	Pages 7 - 8
● Policy Typology	Pages 8 - 9
● Conclusion	Pages 9 - 10
● Bibliography	Pages 11 - 12

Introduction

Since the 1970's the American Grey Wolf has been in a state of gradual restoration. With US wolf populations recovering in the conterminous states, a rule was approved to delist the species from endangered to threatened status under the Endangered Species Act.

Notwithstanding the intent of legal instruments, history has demonstrated that societal values ultimately determine the survival of species such as the wolf (Musiani, Paul 2004).

Assuming that the current protection for the wolf under the endangered species act is ineffective, and that we have been tasked with creating an efficient or additional policy in order to reduce the rate of loss of this species, one can imagine policy that would include: determining what healthy wolf populations are, mandating hunting and trapping policies, and government incentives regarding non harmful wolf deterrence. In terms of alternative scenarios, I will be examining the wolf's status as a pure public good, and decide accordingly whether distributive or regulatory policy typology are appropriate approaches to the issue. Whether viewing wolves as a pest or an ecological good, it is important to consider that which affects one tier of an ecosystem has a cascading effect. The wolf is no exception to this case, as it sets precedent to the phenomena of trophic cascade as illustrated by the 1995 Yellowstone Park Wolf Reintroduction study (Wilmers, Getz 2005). Trophic cascade benefits other trade animals as well as other natural resources such as trees and water. Therefore wolves, while not necessarily a trade, should also be considered a public good and thusly be federally regulated. This would include being listed on the endangered species list until more appropriate healthy levels of population regulation including not only provisions to manage populations at levels

considered to be sustainable and commensurate with human interest, but also managing and considering urban setting populations (Nurse 2015).

The American Grey Wolf

The 1970's were a time of great progress for environmental conservation. Many groundbreaking laws were passed in hopes of reverting our degrading waters, air, and ecosystems back to a healthier state. Policies were enacted in order to regulate detrimental levels of pollution in our air, water, as well as the species which reside in our shared ecosystems nationally. The Environmental Protection agency was formed to not only defend the United States' once serene environment and its animal inhabitants, but furthermore to protect American citizens from astronomically unsafe levels of pollution in their air, drinking water, and even the animal and farmed greenery they eat. Following the heightened focus on the protection of life within the American borders, conservation efforts turned towards the protection of wildlife. The Endangered Species Act was signed into law in 1973 by President Richard Nixon, and is administered by the United States Fish and Wildlife Service and the National Oceanic and Atmospheric Administration. Under the protection of the endangered species act, wolf population levels began to replenish themselves. Their levels are still nowhere near what they once were. Preceding the arrival of European Settlers on North American soil, wolf populations were estimated to be between a quarter and half a million strong, and wolves lived in harmony with the indigenous people, who revered them as they held a strong cultural and religious significance for their people, and the ecosystem. This symbiotic relationship between the Earth, animals, and people ended when President Theodore

Roosevelt declared the wolves “a beast of waste and destruction”, and called for their eradication from American soil. By 1960 wolf populations fell to the brink of extinction, and the last 300 surviving wolves sought refuge deep in the Minnesota woods, far from the true beasts: man. Wolves slowly began to make a recovery, and sightings further from the southern Canadian border were reported. Following their official listing as an endangered species in 1974, wolves began to slowly grow in numbers, migrating as far west as the Cascade mountains, and as far east as Michigan (A History of Wild...). The true testament to wolf recovery was their reintroduction to Yellowstone National Park in 1995 where 31 wolves were released and soon after the ecosystem was seeing a positive change. The American Grey Wolf is a keystone species; it has strong structural as well as functional impacts on the ecosystem. This was seen following their return to Yellowstone. When the final wolf was killed in Yellowstone, elk populations lost their major predators; “even though Yellowstone elk were still preyed upon by black and grizzly bears, cougars and, to a lesser extent, coyotes, the absence of wolves took a huge amount of predatory pressure off the elk, said Smith (wildlife biologist in charge of Yellowstone Wolf Project). As a result, elk populations did very well, perhaps too well. Two things happened: the elk pushed the limits of Yellowstone’s carrying capacity, and they didn’t move around much in the winter-browsing heavily on young willow, aspen and cottonwood plants. That was tough for beaver (whose population also saw an increase from 1 colony to 9), who need willows to survive in winter” (Farquhar 2016). As seen in this example of the trophic cascade of wolves in Yellowstone, the reintroduction of wolves was beneficial to other species, contrary to popular belief, the

ecosystem and even the elk populations thrived. Furthermore, wolves serve as a carrion species for scavengers of Yellowstone. Due to the effects of Climate Change, winters are shorter than they once were, a detrimental development for species who depend upon snow coverage for protection as well as the inevitable deaths brought on by the cold winter weather. The scraps left by wolves are a major nutritional source for many scavenger species, and their reintroduction is favorable for scavenger species populations (Wilmer, Getz 2005). The American Grey Wolf was federally protected and listed as an endangered species until politics came into play, and due to the monetary gains from hunting license sales in states such as Montana, Idaho, Minnesota, and Washington, the protection of wolves was designated to be mandated by each individual state. Soon after the allocation of power to the state level, wolves were delisted from endangered status in these hunting states. Millions were made from the sales of hunting licenses for deer and elk in the American Midwest, and wolves were viewed as a threat to this thriving state economy boosting business. Due to the predatory nature of wolves, they were seen as the cause of deer and elk populations dipping to low levels, and in turn, a threat to the hunting industry. The U.S. Fish and Wildlife Service sanctioned killings of wolves throughout the regions; killing methods would range from trapping and poisoning to sniping wolves from helicopters. Not only does this lower the already endangered populations, killing off members of a pack is detrimental to the complex integrated hierarchy of these mentally advanced packs as well as effected their distribution of labor already in place for this advanced hunting species. Furthermore, wolves would make isolated attacks on local farm livestock also angering the farming communities, which are

prevalent in the mid western region. Lobbying against the wolves was made easy at that point, and in 2007 they were officially delisted and lost all protection from the endangered species act.

Public Goods

A public or collective good refers to a good that is non excludable in use and/or nonrivalrous in consumption. Nonrivalrous goods typically applies to when more than one person can derive consumption benefits from some level supply at the same time (Weimer & Vining 1998). For example air is considered a non rivalrous public good, for the reason that, a multitude of individuals, collectively benefit by it at the same time; i.e. everyone has to breathe. Shifts in demand due to increases in population, technology, or income are examples of congestion on public goods, which when subjected to overuse, results in negative externalities that aggregately affects all users (Weimer & Vining 1998). The existence of congestion in a public good leads to failure of the markets to achieve Pareto efficiency (Weimer & Vining 1998). Congestion of a pure public good typically deals directly with rivalrous consumption, for example the deforestation of trees for use of paper or the hunting of a bear (or in our case wolves) for their pelt is rivalrous because once that resource is used no one else has access to it. Although theoretically rivalrous in consumption, no immediate market failure appears in cases in which the good is naturally occurring and where supply exceeds demand at zero price. As anyone can take these goods without interfering with anyone else's use it is considered a free good (Weimer & Vining 1998). This rivalrous consumption, can present an open access problem, which if left unregulated can have negative externalities that create the requisite

need for some sort of regulation. “Naturally occurring resources are especially susceptible to the open-access problem. Persons with access to the resource realize that someone else will consume what they do not consume. Thus creating the incentive to overuse” (Weimer & Vining 1998). Wildlife is largely considered *res nullis* public property or the property of no one, which, by this logic wildlife can be deemed a public resource capable of being exploited by anyone in the absence of any law to the contrary (Nurse 2015). In response, Wildlife legislation is intended as a natural resource/conservation legislation whose goal is the effective management of wildlife as a resource for public interest (Nurse 2015). The American Gray Wolf, by membership of wildlife, should thus be considered a public good that needs to be preserved. Beyond the species itself, through means of trophic cascade, demonstrates its importance by maintaining the balance of ecosystems by providing means of survival for other species and by maintaining the geographic area, as seen in the Yellowstone National Park example, which is paramount in maintaining wildlife for future generations to enjoy.

Policy Typology

Leonard Champney outlines the distinction between public and private goods as well as the government activity that outlines the response in public policy in his paper, *Public Goods and Policy Types*. The two public policy typology that he outlines are designated as regulatory policy and distributive policy. Regulatory policy applies coercive selective incentives by threatening to impose sanctions on some while withholding sanctions from others (Champney 1988). In practice, this would mean creating mandates that would enforce penalties on violators such as persecution of drunk drivers to deter potential

offenders, thus keeping the roads safer. In terms of our scenario, this would mean the federal regulation of hunting and trapping of wolves, not only for hunters but also for farmers who view wolves as a threat to their livestock. Regulation would include maintaining wolf populations at a healthy level dependent on geolocation. Furthermore, the creation of federal regulation rather than state regulation for wildlife legislation deters economic motivation in politics, as seen in the mid-western states delisting of wolves in order to protect deer and elk population with the intent to sell more hunting licenses- a million dollar industry. Distributive policy is defined as selective incentives offered by conferring rewards on some while denying to others (Champney 1988). This approach propagates selective behaviors by rewarding compliance. A strong example for the wolves includes a government incentive to install wolf deterrent devices on their fences to protect farm livestock. Such policy would give farmers a tax incentive to install a device such as a frequency emitting apparatus that is tuned to deter wolves, non-harmfully, from approaching livestock enclosures. Hopefully, this too would improve farmer wolf relations and take away the pressures by farmers for the extermination of wolves.

Conclusion

Between the differing policy typology for reducing the rate of overexploitation of Gray Wolves, both regulatory and distributive policies would be efficient, and the wolves population would benefit under both ideals. The most efficient management would be to take a multilateral approach and incorporate both policies in a comprehensive Wolf Overexploitation Legislation Federally (W.O.L.F.). Imposing hunting and trapping

regulations based upon annual Gray Wolf populations, under regulatory policy, would allow the maintenance of healthy populations at levels considered to be sustainable and commensurate with human interest, but also managing and considering urban setting populations (Nurse 2015). Distributive policy would be ideal in not only maintaining the safety of farm livestock, but also in developing new methods or technology to deter wolf encroachment of farmland and urban areas. Government incentives rewarding farms that implement a frequency emitting apparatus that is tuned to deter wolves, non-harmfully, from approaching livestock enclosures, and the creation of future methods akin to this, will promote the safety of wolf populations. The benefits of Trophic cascade for other trade animals as well as other natural resources such as trees and water (as seen in Yellowstone National Park) illustrates the benefits of wild wolves and therefore, while not necessarily a trade, should be considered a regulated pure public good.

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