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## The North American Model of Wildlife Conservation as Means of Creating Wealth, Protecting Public Health while Generating Biodiversity.

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**ABSTRACT.** The North American Model of Wildlife Conservation arose as a continental conservation model in close cooperation between the United States and Canada in the first two decades of the 20<sup>th</sup> Century. Organized sportsmen were behind this new system of conserving wildlife. It grew and developed subsequently in populist fashion across many jurisdictions via a mixture of grassroots democracy and elite guidance. It quickly laid the groundwork for wildlife recovery so that wildlife populations reached great abundance, occasionally overabundance. It is based on a number of root-policies such as the public ownership of wildlife, the allocation of surplus wildlife by law, the prohibition of markets in dead wildlife, the killing of wildlife for cause only, the guidance of management via science, the management of wildlife between sovereign states by treaties. It was held together by a brotherhood of blue-collar hunters and anglers. Among its achievements are the restoration of wildlife continentally, the creation of a new profession: the wildlife biologist. It spawned a large number of sportsmen organizations that actively pursue the welfare of wildlife such as the venerable Boone & Crockett Club, The Rocky Mountain Elk Foundation, Ducks Unlimited, The Foundation for North American Wild Sheep, The Mule Deer Foundation, The Wild Turkey Foundation and many others. It has generated a rich economy based on hunting, fishing and wildlife viewing in excess of \$100 billion dollars annually. It has created a flourishing technology surrounding all hunting, fishing, viewing, hiking, camping, filming as well as rich markets in wildlife art. The general prohibition on keeping wildlife privately has protected public and live stock health by preventing a bridging for pathogens and parasites between humans, livestock and wildlife. Moreover, this prevented the mixing of a plethora of pathogens under domestic conditions as each species brought into captivity comes with its "zoo of pathogens". The SARS outbreak originating in farmed civet cats is a prime example. Unfortunately this splendid prohibition has been breached by game ranching with just the expected results. Wildlife is very meaningful to North Americans and provides the basis for effective wildlife conservation, the backbone of restoring North America's biodiversity.

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*The North American Wildlife Conservation Model* has evolved over nearly a century in response to the near elimination of wildlife from most of the continent by the end of the

19<sup>th</sup> century. Garrett Hardin's "Tragedy of the Commons"<sup>1</sup> had run its course to the bitter end followed by the extermination of "vermin" that interfered with cattle and sheep production including grizzly bear, wolf and even cougar over wide areas of their range. Several once spectacularly abundant species went extinct, foremost the passenger pigeon and the Eskimo curlew. Waterfowl, shore birds even song birds were then severely depleted by market hunting and uncontrolled pot-hunting, while the habitat of wildlife was being converted to plowed fields for corn, wheat or cotton, livestock pastures and urban sprawl. Yet in these dark hours for wildlife there arose a unique system of wildlife conservation and management that restored wildlife to the North American continent and made it a source of wealth and employment. This restoration of wildlife and biodiversity to North America is probably the greatest environmental achievement of the 20<sup>th</sup> century and the North American Model of Wildlife Conservation may be one of the great achievements of North American culture. It is most significant that it turned Garrett Hardin's "Tragedy of the Commons" into a "Triumph of the Commons"<sup>2</sup>, and, contrary to advocates for private wildlife, it shows that private ownership of wildlife is in the long term not compatible with conservation. It has since been examined by a number of symposia<sup>3</sup> as well as discussions in the popular press<sup>4</sup> and the internet. It is continental in scope, encompassing the United States and Canada as it was formed in close cooperation between leading individuals from both nations. Here Canada, a loyal colony of Great Britain opted not for the manner of wildlife conservation of the European mother country, but chose instead to unite under new common policies with the United States. It is a model based on raw grassroots democracy, and is thus the product of innumerable political discussions and decades of hands-on experience. Consequently, it is not the product of a single mind, but expresses the collective wisdom of nearly a century of continent-wide debate and hard bargaining. It retained what has worked. It has thus a deep wisdom and could not have been invented by any single mind. We have before us a successful conservation model, one worthy of scrutiny, regardless of one's political philosophy. And yet, ironically, this model of wildlife conservation has only recently been recognized as such<sup>5</sup>. It is poorly known or understood in North America, it is politically incorrect for much of the urban electorate, and it is opposed by various special interests including some agricultural and environmental organizations. You will not hear about it on radio or TV, and even among wildlife managers there are a good many that must plead ignorance when asked about the North American Wildlife Conservation Model. A close examination of that model is most illuminating as it is pregnant with tested ideas about how to manage a renewable resource in a sustainable manner. However, it requires certain pre-conditions to flourish, such as a tradition of grassroots democracy, the acceptance of wildlife as food, ready access by all citizens in good standing to wildlife harvest and the requisite tools, including weapons, which raise questions about its universality and transferability.

What are the successes of the North American Model of Wildlife conservation?

### **Successes**

In briefly reviewing the major achievements of the North American Wildlife Conservation model I am following primarily two publications<sup>6</sup>. Its achievements are, briefly as follows:

1. *The recovery of wildlife and bio-diversity continent-wide*. This includes the recovery of species that were at the brink of extinction a century ago, which means most species of wildlife. Some conservation efforts went so well that in the case of the buffalo, the society, The American Bison Society, dedicated to saving the buffalo voted itself out of existence considering its mandate fulfilled. Between 1974 and 1999 wild sheep in North America increased in number by almost 50 percent<sup>7</sup>. There are again millions of white-tailed deer in North America as well as other big game, but the recovery also included waterfowl, shore birds and song birds. Where the recovery was wanting, concentrated efforts are at work to restore the species, including the much publicized efforts to restore grey wolves and whooping cranes. The plight of a few forms, however, has not been addressed by wildlife conservation groups most notably the woodland caribou<sup>8</sup>.
2. It generated a *novel economic use of wildlife* so that great wealth and employment are created while the resource continues to grow and to prosper. It is not merely sustained! In 1996 some 77 million US citizen spend in excess of 100 billion dollars on wildlife related activities<sup>9</sup>. They create about 50,000 jobs per billion dollars (US) in throughput. There are similar trends for Canada<sup>10</sup>. The following may help visualizing the sheer size of the US wildlife economy: if one divides the total first-time expenditure of 101 billion dollars into the area of the United States than one obtains an annual expenditure of about \$27,500 per square mile. Here we can also study the distinction between markets that destroy wildlife, such as markets in dead wildlife, and markets that increase wildlife abundance, such as markets based on encountering living wildlife. An example of the worth of wildlife is documented by the annual auctions for special big game hunting permits such as the “*governor’s or premier’s permits*” for mountain sheep, but also elk, moose and deer. These auctions, open to all, are limited to one permit for a trophy species per year. For the less affluent, raffles have been established for a similar permit. In 1998 a record \$405,000 was bid to hunt one bighorn ram in Alberta, Canada<sup>11</sup>. Hunting also creates public benefits such as the “*freedom of the woods*” that results from keeping large and potentially dangerous carnivores timid and afraid of humans, as without this we could not use our woods and camp grounds safely. In addition, once wildlife populations expand, hunting keeps in check such wildlife population, which otherwise could expand to cause damage to agriculture, forestry or the environment at large.
3. It led to a new uniquely North American profession: the *university trained wildlife biologist or manager*. The first notable practitioner among these was Aldo Lepold<sup>12</sup>. He rose to be an idol of not only wildlife biologists, but of the environmental movement at large with his inspiring writing<sup>13</sup>. It insured that North America’s wildlife received well-qualified, professional attention and care in its conservation and management.
4. One of the greatest achievements of North American wildlife conservation is *public involvement with wildlife*. This includes the whole-hearted participation of the blue-collar segment of society in contrast to a primary involvement of the elite in European societies.

This makes for a large volunteer force willing to act on behalf of wildlife. Outwardly, public involvement takes the form of a large number of conservation organizations, formed at the federal, provincial or state, and local levels. Notable among these are sportsmen organizations supporting single species or related groups of wildlife, such as the Rocky Mountain Elk Foundation, Mule Deer Foundation, Ducks Unlimited, Foundation for North American Wild Sheep, Wild Turkey Foundation, etc. There are also effective conservation societies such as the venerable Boone & Crockett Club, the Campfire Club and the Audubon Society. The volunteers have great achievements to their credit. The Rocky Mountain Elk foundation conserved over 3.8 million acres of elk habitat since its inception. A volunteer force of less than 6,000 Americans and Canadians, uniting biologists, managers, hunters, guides, outfitters and interested parties in a common cause under the Foundation for North American Wild Sheep, increased the mountain sheep population by almost 50% in the last 25 years. Yet this is a small foundation! You can read all about it in *Return of Royalty*<sup>7</sup>, available from the Boone & Crockett Club. These are examples – and there are many others - of what volunteers, irrespective of nationality, in free association, without call for legislation or government funding can achieve under existing legislation. The genius of North America's system of wildlife conservation is that it captured the enthusiasm and support of all strata of society.

5. *Taxing for wildlife.* North Americans generated a secure funding base for wildlife conservation, by adopting the user-pay principle as policy in 1930 by the American Game Conference. Ever since North Americans have taxed themselves on behalf of wildlife (Migratory Bird Stamp Act 1934; Pitman-Robertson, Dingell- Johnson and Fish & Wildlife Conservation Act, Alberta's Buck for Wildlife Fund etc.)<sup>14</sup>

6. *Habitat conservation.* North Americans created an extensive public system of protected areas for wildlife, including great national parks and monuments, wildlife refuges, provincial parks and ecological reserves. Habitat conservation on agricultural land results from initiatives such as the US Conservation Reserve Program. In addition there are significant ongoing private efforts to acquire habitat such as those by the Nature Conservancy or the many foundations dedicated to wildlife. They act continentally, continually acquiring habitat by purchase or gift, or habitat protection through liens on the land. In addition, military reserves, by long tradition, respect wildlife's presence and contain some of the finest wildlife habitats and populations.

7. *International treaties.* North Americans recognised early the need to protect and manage wildlife which crossed national borders in its migrations. They negotiated the first and effective international wildlife treaties, such as the 1911 Fur Seal Treaty, but above all the famous 1916 Convention for the Protection of Migratory Birds.

8. *Conservation of large predators.* Despite early and continuing sentiments against large predators, such were nevertheless retained or reintroduced as a functioning entity of ecosystems. They are controlled, or protected or reintroduced, depending on circumstances. Also, predators are better off under hunting regulations, because the kill is very closely controlled, is under constant public scrutiny and persons are held

accountable for each kill. Not so in Canada's national parks in which bears have notoriously a very high chance of dying due to concerns for public safety<sup>15</sup>.

9. *Preservation of non-game species.* Since from the very outset the out-of-doors was considered an integrated whole. That is, very early on under the so-called Roosevelt Doctrine<sup>16</sup> conservation was considered broadly. Consequently, the history of bringing non-game species under the same umbrella as game species, has a very long history. However, not all conservation was altruistic, rather, it was usually motivated by utility. This included song birds which were considered early in this century effective allies against various crop insect pests<sup>17</sup>. Moreover, the focus on particularly desirable game species casts a broad halo effect from which non-game species benefit. Although specific legislation to save endangered species has been in effect across the continent, such legislation could not succeed in the absence of a hunting culture which had practiced broadly based habitat conservation which simultaneously conserved bio-diversity.

10. Law enforcement in North America enforcing conservation law is normally a remarkably civil affair, although it can be as dangerous as its European counterparts<sup>18</sup> when commercial poaching is involved<sup>19</sup>. Because wildlife conservation is broad-based and an exercise in participatory democracy, there is much self policing involved. It differs from European models in which wildlife is private property and its protection is pursued accordingly.

### **Foundation Policies.**

The primary or root policies, the foundation values on which the North American Wildlife Conservation Model is built, were best summarized in a collaborative paper that included the insights of Shane Mahoney then chief of Research of the Newfoundland and Labrador Wildlife Division and John F. Organ, Wildlife Program Chief of the US Fish and Wildlife Service. This paper is of primary importance<sup>20</sup>.

### **Wildlife as Public Trust Resources**

Wildlife in North America is Public Property, not merely *de jure*, but also *de facto*. Wildlife may be held privately, but only as a trust for the public and at the discretion of the sovereign. The Public Trust doctrine has a long history in the US.

*Why is public ownership of wildlife so important for wildlife conservation?*

1. Public ownership prevents the inevitable consequence of private ownership, such as the domestication of wildlife as well its genetic alteration to fit market whims. Domestication systematically diminishes the anti-predator adaptations of a species by making it more tractable and easier to control under conditions of captivity. Domestication has led to severely reduced brain-size<sup>21</sup>. Domestication is done so as to serve specific markets and therefore leads to genetic alteration of a species to produce desirable products. Gigantic antlers in deer or horns in buffalo are examples as well as the restructuring of bison to assume the carcass confirmation

- of cattle is another. The latter is done to increase the carcass value as the carcass of domestic cattle compared to those of wild bison has a higher proportion of high-priced cuts. Selecting for antler size in deer selects for social incompetence. Domestication is thus the systematic genetic alteration of innate adaptations. Such altered stock can escape into the public domain and pollute public wildlife irreversibly.
2. Public ownership of wildlife largely prevents the mixing in captivity of many species and thereby prevents what parasitologists have labeled as “transporting the zoo” (of pathogens and parasites). Each species carries its contingent of pathogens and parasites which, transferred to another species may mutate into strains dangerous to public health. Transferring wildlife into domestication increases the risk of pathogens escaping into human populations. Private ownership of wildlife generates a disease bridge across which may pass diseases affecting livestock and human health on one hand and public health on another. Retaining wildlife in strict public trust prevents wildlife farming and the building of a disease bridge between wildlife, livestock and people. It is good public health policy. The recent SARS epidemic originated in farmed wildlife, namely in farmed palm civet cats in China<sup>22</sup>. In any confrontation of private agricultural and public wildlife interests, wildlife is inevitably the loser<sup>23</sup>.
  3. Wildlife in public ownership insures the ecological basis for native cultures to continue. One way to diminish native cultures is to make wildlife and their habitat private property<sup>24</sup>.
  4. Because wildlife is in the public domain, is it possible to consider national systems of wildlife sanctuaries and wildlife treaties<sup>25</sup>.
  5. Because the state is ultimately responsible for wildlife, it is possible to hire professionals to do the conservation and management on behalf of the public. Here lies the origin of the North American profession of wildlife biologists.
  6. Wildlife in the public domain is subject to public scrutiny and concern. The public has a say in how wildlife is to be treated. When grizzly bears become private property, *de jure* - or *de facto* by virtue of being turned over to owners of private or leased land, their fate is no longer the public's business.
  7. Once wildlife is made private it pits private wildlife against public wildlife, a battle in which public wildlife is the inevitable loser<sup>26</sup>.

### **Elimination of Markets for Wildlife**

The elimination of trafficking in dead game animals, or their parts and products derived from them, is one of the most effective and important policy of wildlife conservation. Its introduction was revolutionary as North Americans at the turn of the 20<sup>th</sup> Century were avid consumers and traders of wildlife.

*Why is the elimination of markets in wildlife and its parts and products so important to conservation?*

1. The elimination of markets in dead wildlife eliminates a financial incentive for the illegal taking and selling of public wildlife. Where such incentive exists it promotes

illegal markets and encourages the criminal element to enter and ruthlessly exploit wildlife. Law enforcement under such circumstances is hazardous in the extreme and of questionable efficiency<sup>27</sup>.

2. Eliminating monetary value from wildlife encourages the public to enjoy wildlife for its own sake. A grizzly bear is no longer a walking bank account.
3. The acquisition of wildlife outside the market place is bound to significant private effort. The resulting individual efforts and exertions, the “sweat equity”, as well as the significant monetary expenses incurred acts as a deterrent to killing wildlife. So does the inability to sell legally killed wildlife.

### **Allocation of Wildlife by Law**

Allocation of surplus wildlife for consumption by law, and not by the market place insured an equal allocation of wildlife to citizen irrespective of wealth, social standing or land ownership. Every citizen in good standing is able to participate in the annual harvest of wildlife within the laws set by legislatures. In this instance, aboriginal people are an exception because treaty rights also govern their wildlife harvest.

*Why is allocation by law so important to wildlife conservation?*

1. This policy generates a sense of propriety and ownership by those participating in the wildlife harvest and is fundamental to the public participation in wildlife conservation, be it directly as volunteers or indirectly via the legislatures.
2. This policy, by encouraging citizen to regard wildlife as their own, generates large national and continental organizations of citizen who join together into societies on behalf of wildlife. Large foundations dedicated to single species or species cluster are a North American phenomenon. These non-government organizations channel funds and the efforts of volunteers ;’towards the maintenance and spread of such wildlife as well as the acquisition of their habitat.
3. Because all citizen in good standing have access to wildlife as prescribed by law it removes wildlife from any image of elitism, or as the plaything of the filthy rich, a symbol of privilege. Wildlife controlled privately by an elite can become a symbol of the hated elite and suffer the consequences. This can be particularly tragic when public sentiments against the elite and their symbols are unleashed in revolutions<sup>28</sup>.
4. Egalitarian allocation provides the basis for an equitable cost of conserving wildlife through a user pays principle. Because enough of the public avail themselves of the opportunity to obtain wildlife for private consumption, there is enough funding for conservation. User pay means that hunters are footing most of the bill for wildlife conservation and in so doing provide a benefit to society at large – the maintenance of wildlife and the continent’s biodiversity.

5. An egalitarian distribution of opportunities to acquire wildlife also generates indirect public benefits. One of these is the “freedom of the woods”. In this case the harassment of bears through inefficient hunting conditions bears to avoid humans, allowing safe camping and hiking. Clearly, this depends on reasonably large numbers of hunters going into bear habitat.

### **Wildlife Can Only be Killed for a Legitimate Purpose**

Wildlife can be killed only for cause. That is, it can be killed for food, for fur, or in self defence or in the protection of property. Wanton waste of hunted wildlife may be considered a felony in some jurisdictions. This policy obliges all hunters to properly make use of animals killed.

*Why is killing wildlife for cause only a desirable conservation policy?*

1. This policy outlaws wanton slaughter which was once not uncommonly practised in market hunting days or a mark of prowess among so-called hunters. It reduces wildlife mortality and questions all killing.
2. Allocation plus regulation of the taking of wildlife by law is *enforced inefficiency*. This is a very important point, as it is the enforced inefficiency of harvest which generates wealth and employment. Efficient harvest, by contrast, eliminates wildlife without generating public wealth. Since an animal taken in hunting must not be wasted, it insures that the hunter spends a fair sum of money in transporting, processing, storing and consuming the animal. This generates a demand for services.
3. Enforced inefficiency also triggers the invention of gadgetry, a consequence of ingenuity rewarded by the marketplace. Ironically, North America’s wildlife economy is thus comparable to the economy inherent to automobile industry, where the unending multiplications of a product that generate some convenience at best, or, at worst merely enhance the owner’s status, generate huge wealth. Such gadgetry in no way enhances transportation efficiency.

### **Wildlife is Considered an International Resource**

Wildlife is considered an international resource to be managed co-operatively by sovereign states. This policy is basic to international wildlife treaties as well as the broad based, continental co-operation between professionals and conservation organisations.

*Why is wildlife considered formally as an international resource conducive to conservation?*

1. This policy brings wildlife to the highest political level as a public good. It insures federal involvement in all nations affected.

2. This forces - by law - all federal, provincial, state and municipal jurisdiction affected into active cooperation.
3. This generates a lasting federal attention to wildlife crossing the borders.
4. Treaty law is considered strong law that supersedes that of lower national jurisdictions. Thus treaties are effective conservation and management tools.

### **Science is the Proper Tool for Discharge of Wildlife Policy**

Science is considered to be the proper tool for discharging management responsibilities. This is the Roosevelt Doctrine<sup>29</sup>. This is another basic policy that gave rise to science-based wildlife professionals hired by the state to perform wildlife conservation.

*Why is science important?*

1. Science is by and large our best tool to formulate appropriate management and policy options, because it is based on a disinterested pursuit of understanding. It stands apart from political considerations and favours a hands-off policy by elected representatives.
2. This policy assures that public wildlife is in the hands of exceedingly well educated individuals and that it is scrutinized continuously.

### **Democracy of Hunting**

This is paraphrased from Geist et al. 2001<sup>3</sup>: the concept of “sport hunting” has origins in Europe<sup>30</sup>. The term “sport” as applied to hunting referred originally to a code of honor rather than to a frivolous recreational pursuit. It was subsequently adopted to distinguish hunting under codes of fair chase from market hunting, and is not an appropriate descriptor of either the modern European or the North American hunting<sup>31</sup>. The European archetype was dramatically different than what emerged as “sport hunting” during the 20<sup>th</sup> century in North America. The European model allocated wildlife by land ownership, privilege or income, whereas in North America, all citizens in good standing can participate. The European model, a manifestation of class conflict between aristocracy and commoners, led to wildlife poaching as a means for inflicting revenge on the ruling class<sup>32</sup>. Indeed, in Africa today efforts to combat poaching have led to development of programs designed to direct economic returns on hunting fees to the rural indigenous peoples who otherwise would have no reason to stop poachers<sup>33</sup>. In North America, where all citizens have the opportunity to participate, everyone is a stakeholder, not just the privileged. This has been termed by Leopold “democracy of sport”<sup>34</sup>. The foremost spokesman for egalitarian allocation, and participation of common man in hunting was Theodore Roosevelt. He wrote eloquently of the societal gain to be made by keeping land available for hunting by common people<sup>35</sup>. Hunting as a deep-rooted passion is thus fundamental to wildlife conservation<sup>36</sup>, but only within a framework of honorable, ethical conduct<sup>37</sup>. By adopting a code of “fair chase” North Americans

explicitly opposed the excess of wildlife slaughter, particularly such in enclosures, as practiced in Europe at the turn of the 20<sup>th</sup> century – as well as historically<sup>38</sup>.

### **What can we learn from the North American Wildlife Conservation Model.**

1) Hunters support wildlife conservation because there is something in it for them: a payoff in their annual allocation of wildlife. The motive is selfish, not idealistic. As a profit motive drives a capitalistic economy, so a profit motive drives the North American system of wildlife conservation: the hope for a richer harvest and a richer experience in hunting. Consequently, with self-interests in wildlife, hunters become concerned, active spokesmen for and supporters of wildlife, and experience shows that wildlife will then flourish. A ruling elite which elevates wildlife against the self-interests of the common man causes wildlife to suffer and be destroyed by the common man if and when the opportunity to grasp power arises in revolutions. This lesson goes back to medieval forest laws (which were in essence animal rights legislation), and are valid for today's top-down animal rights legislation. Our only hope to retain thriving bio-diversity is to embrace a human-centred view for the use of the biosphere, in which wildlife provides for human needs and aspirations and is therefore valued by a broad segment of society. Please note: a romantic, purely eco-centric, that is, an impersonal and unselfish view of biosphere management that, by definition, excludes broadly held aspirations to use resources by common people, cannot but fail. How much wildlife can mean emotionally is illustrated by the novelist William Faulkner's response to being informed that he had won the 1949 Nobel Prize for Literature and would have to go to Sweden to receive it. Faulkner said "I can't get away. I'm going deer hunting!" And he so informed the Nobel prize officials by mail<sup>39</sup>.

2) Wildlife must remain a harvestable resource, supplying in the first instance food for our tables. It is an alternative to agriculture generating utility from the land. It must not be viewed as a purely recreational resource, as a source of "sport" or entertainment. Its first order of utility is the provision of a harvest of unusual food of exceptionally high nutritional value<sup>40</sup>. Wildlife thrives with attention and dies from neglect. Utility fosters attention.

3) We must, therefore, retain the utility of wildlife. For instance, song birds were historically protected not for moral or ethical reasons and not because song birds were cute and entertaining, but because they were valued as destroyers of insect pests in fields, forests and gardens.<sup>41</sup> Today song birds have no utility in North America, and enjoy little organised public support such as is enjoyed by native game birds, including turkey, ruffed grouse and water fowl. Song birds may have the protection of the law, but little in the form of tangible popular support – even from bird watchers.

4. We must examine for retention the seven basic conservation policies which have served us so well in bringing back wildlife and retaining continental bio-diversity in North America. These contain many counter intuitive lessons about how to maintain and foster a public resource. Would we but dare manage forests the way we - cheerfully -

managed wildlife. Would we but manage marine fisheries the way we manage wildlife in North America –with an open, transparent and accountable system.

5. One must point to the awesome power of the democratic process, in which we set aside willingly our differences and unite in a public cause - fostering the welfare of wildlife and, through it, the biosphere as well. One should recognize the power of volunteers as social equalizers, as reciprocal carriers of information and power. In this way, one retains accountability and openness which has characterised to date the relationship between wildlife managers and the public in North America. Establishing a partnership between managers and the public, and unlocking the spirit to act in the public good, is an essential component to achieve wildlife conservation.

6. Today wildlife conservation in North America is beginning to suffer from an ignorance of the past, be it an uninformed judiciary or through uninformed managers of wildlife unable to defend the system. As Emanuel Kant once quipped: *We learn from history that we do not learn from history.* We must buck the trend!

The universality of the North American Wildlife Conservation Model is in doubt, however, because it is built on some fundamental assumptions, the primary one being that all citizens may participate in both the harvest of wildlife and its management. And those assumptions entail the availability of firearms to all citizens and not merely the countries elite. An armed citizenship, one practiced in the art of grassroots democracy and accepting of decisions reached by public debate and compromise, is fundamental. Therefore, there has to be an acceptance of responsibility for a public resource, despite embracing a capitalistic economy and values. Citizen must see wildlife as a common good and must accept sharing on trust. Even the country's elite must participate in the processes of wildlife conservation and must not be exempt from such. There must be willingness by the public to privately support wildlife, accepting public efforts at conservation as minimal at best.

Some agricultural interests would like to tie wildlife ownership to land ownership and make wildlife a private resource to be managed according to market demands and sold to the highest bidder. Such interests openly oppose the North American Wildlife Conservation model. The same goes for corporations who, for whatever reasons, control large land areas and are interested generating revenue by leasing out hunting rights to the highest bidder. Support for these efforts comes from a significant sector of urban-based affluent hunters who chaff at bag limits, short seasons and crowded hunting grounds. Such individuals are effectively supported by gun control advocates who lobby for a disarmed public. In practice, gun control means disarming the blue-collar segment of society leaving the elite well armed. Without effective, egalitarian public hunting there will be little opposition to the privatization of wildlife, making it a play-thing of the elite as it has been so often in the past. Canada's most unfortunate gun control legislation is well on the way doing just that and it is thus in opposition to the North American Wildlife Conservation Model. It is self evident, however, that in dictatorships this model is unlikely to be accepted, based as it is on armed civilians who practice effective grassroots democracy.

## Notes and References

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<sup>2</sup> See the misuse of the concept of the *Tragedy of the Commons* in relation to North American wildlife in the *Economist* 21 (October 22<sup>nd</sup> 1988).

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<sup>11</sup> Trophy hunting has developed historically a number of times to excess in the Occident, in particular in late medieval times in Europe, but also during the 19<sup>th</sup> and 20<sup>th</sup> centuries. These auctions and raffles are an outgrowth of this. However, in North America trophy hunting was advanced by the Boone and Crockett Club originally as a means of reducing wildlife slaughter, shifting the emphasis from numbers of big game shot to quality of animals taken. Sportsmen gained standing not from the number of animals shot, but by the quality of trophies taken. In a similar vein the club advances "fair chase" in order to oppose imitation in North America of the European elite's killing of big game in enclosures, or "canned shoots" as popularly described. In Europe the quest for superior trophies led to detailed investigations into how to grow massive antlers in deer, leading to the finding that, following luxurious feeding, it was essential to discourage males from rutting. Males that abstained from rutting saved body resources. These were then available for inflated body and antler growth. The exceptionally rare "trophy" male in nature was, consequently, a male that did not participate in breeding and was thus of no consequences genetically. That is, trophy males are likely to be of low fitness (see Geist V. 2000 Chapter 22. Under what system of wildlife management are ungulates least domesticated? Pp. 310-319 in Elisabeth S. Vrba and George B. Schaller (eds.) *Antelopes, Deer and their Relatives*. Yale University Press, New Haven, Con.)

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- <sup>12</sup> Leopold, A. 1933. *Game management*. C. Scribner's Sons, New York, NY. 481 pp.
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