



Future Challenges to the Model

WHY COLLAPSE IS POSSIBLE AND ALTERATION INEVITABLE

By Shane P. Mahoney and David Cobb, Ph.D.

As the articles in this issue have explained, the philosophy, institutions, policies, and laws that collectively govern wildlife conservation in North America have become recognized as the North American Model. A retrospective concept, the Model enhances understanding of some of the most important historical elements of wildlife conservation in North America and of the vital role hunting and hunters have played. It also has led to the recovery of many wildlife species at a continental scale, generated a diverse economy, and enriched society by sustaining wildlife and habitats.

This approach to maintaining wildlife in the face of change developed organically. Evolving over time, the Model added to and refined its principles, scientific institutions, and funding mechanisms in response to changing social, economic, and environmental contexts. In a critical sense, it has always been reactive. Looking ahead, we must acknowledge that its resilience lies in its adaptability.

Achilles' Heels

Though the seven basic tenets of the North American Model are clearly defined, these principles were neither simultaneously conceived nor consistently applied among wildlife taxa, ecosystems, or user groups. In this regard, the Model has seriously fallen short of its intended inclusivity regarding wildlife and society.

The Model's inception occurred in a time of wildlife decline and the reckless pursuit of natural resources. Hunters and anglers became the great agitators for conservation, and thus game species emerged as the iconic symbol of both decimation and recovery. Conservation of game was the focus beyond which radiated lesser efforts for biodiversity at large. Though conservation of this core group of terrestrial and aquatic species has benefitted other species and ecosystems, formidable bias still resonates in the Model's taxonomic agenda.

Furthermore, the Model's bedrock philosophy of sustainable or wise use gradually diverged from

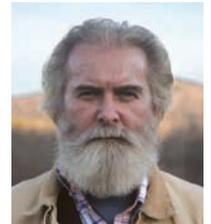
other priorities, such as wilderness preservation and non-hunting recreation, leading to the false notion that only those who hunted, fished, or trapped were actually utilizing or advocating for wildlife. It ignored the reality of very substantial human pressures arising from other forms of wildlife enjoyment. In failing to challenge this notion, the Model's application has helped reinforce the great conceptual divide that now often separates conservation activism along the fault line of hunting.

To some appreciable extent, therefore, the North American Model may have helped design its own challenges, principally by failing to emphasize a broader range of biodiversity, a more inclusive public constituency, and a closer study of changing societal values and trends. However true this may be, as the following list of global and local challenges shows, many threats to the Model are outcomes of powerful societal forces that are affecting change in virtually every aspect of daily life. In this regard, the conservation movement shares much in common with other vital societal institutions in the throes of a tidal wave of change.

Global population increase. Perhaps the most intractable and pervasive of all challenges, human population growth will continue to impact conservation across the globe. Not only will numeric pressure increase a broad suite of demands on ecosystems, but cultural diffusion via immigration is leading to a more heterogeneous melange of attitudes towards wildlife, which will add complexity to conservation policy.

Climate change. Inevitable and catalytic, climate change will pose an enormous challenge to the North American Model framework, bringing ecosystem changes, gaps in scientific knowledge, and the need for complex international collaboration among diverse cultures. Potential effects on migratory and endemic species may be especially complex.

Global economics. The highly integrated global economy leaves less room for national,



Courtesy of Shane P. Mahoney

Shane P. Mahoney is Executive Director for Sustainable Development and Strategic Science with the Department of Environment and Conservation, Government of Newfoundland and Labrador and Founder and Executive Director of the Institute for Biodiversity, Ecosystem Science, and Sustainability at the Memorial University of Newfoundland and Labrador.



Credit: Geoff Cantrell

David Cobb, Ph.D., CWB, is Chief of the Division of Wildlife Management for the North Carolina Wildlife Resources Commission.



regional, state, or provincial governments to effectively budget for wildlife management and set funding priorities. Geopolitical realities will increasingly create abrupt and large-scale economic upheavals that will force major shifts in governments' social agendas.

Urbanization. Land-use changes have long impacted wildlife conservation, from creating large markets to generating powerful voting

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blocks that often put conservation ethics at odds with sustainable use. Conversion of natural habitats or rural lands into urban environments or large-scale agriculture, timber, feedstock, or biofuel operations will continue to alter ecosystems and impact associated wildlife. Much conservation effort today involves trying to restore or maintain affected habitats and their plant and animal species. Integrating such efforts at a continental scale in the face of accelerating change will pose one of the Model's most acute challenges.

Novel ecosystems. Little emphasized in conservation forums, there is a growing tendency for ecosystems to not only show signs of change in species populations but to see the emergence of entirely new suites of habitat-organism complexes. Such regime shifts have been most extreme in marine environments following excessive over-exploitation, as seen off the west coast of Africa. Climate change is also enabling temperate species to invade Arctic environments in North America, forcing Inuit peoples to borrow English language expressions for species never before seen in their regions. This trend reflects the large-scale environmental impacts driven by human population increases

and resource demands. While substantial change in continental ecosystems has been part of the North American Model experience, increasing novelty will challenge our scientific, educational, and funding institutions.

Abundance and superabundance. The North American Model was spurred into being by the collapse of charismatic species of direct importance to the public. The memory of that dark phase in the continent's history has had a long reach in conservation circles. Today, however, white-tailed deer and many other once-vulnerable species are thriving and have reached numbers that affront both public sensibilities and ecosystem structure. The Model's appeal for constant vigilance on behalf of wildlife is thus hard to convey, making it a victim of its own success.

The human-nature divide. Increasing urbanization, changes in land use, new technologies, changes in recreational activities, and new socioeconomic trends have changed the human relationship to nature and created a vastly different public mindset and value system than prevailed throughout much of the Model's history. Dealing with such deep-rooted social change is not a quick study for conservation practice, and the likelihood of reversing this trend is very low. However, regarding this new reality as somehow abnormal is a serious strategic error. Like all social trends, it is neither normal nor abnormal but simply a reality of modernism. It will not be reversed. The Model will have to adapt.

Wildlife as vermin. The growing number of high profile wildlife diseases and the increasing possibility for disease transfer from wildlife to humans are bolstering fears that wildlife presents a public health risk. Diseases such as AIDS, West Nile virus, chronic wasting disease, Lyme disease, avian influenza, hydatid, and others are making headlines, increasing conservation costs, and creating widespread concern. These diseases—in combination with other human-wildlife conflicts such as predator attacks on people or livestock, crop depredation, animal-vehicle collisions, and the ruin of recreational areas by overabundant geese—are resulting in more people wanting wildlife controlled or eliminated rather than managed. This poses a threat to the Model, which was founded on the assumption



that the public viewed wildlife as majestic and desirable, not disease ridden and pestilent.

Changes in public perceptions. Since the Model's inception, it has focused on species that are hunted, fished, or trapped. While these 'takings' of wildlife have long been a part of North American society, their acceptance is being challenged by animal rights activists as well as by social trends and the growing disconnect from nature. Hunters and anglers have long been the most stalwart supporters of the Model. Retooling it in the face of both declining hunter and angler numbers and public opposition to their activities—and explaining the *modern relevance* of hunting to an increasingly distanced public—are major challenges today.

Commercialization and privatization. Perhaps more insidious than the divisions between hunters and non-hunters are the divisions within the sustainable-use sector itself. Nowhere is this more evident than in the debate over the commercial use and privatization of wildlife, which threaten the Model's core notions of public trust, democracy of hunting, elimination of markets for wildlife, and wildlife being killed only for legitimate purpose. Game farms, exclusive hunting leases, genetic engineering, canned hunts, and markets for some species are threatening the Model's historic standards. The challenge is to curb these emergent practices while providing alternative incentives that will encourage private landowners to practice sound wildlife conservation. As Aldo Leopold deliberated, we must ensure that wildlife will thrive on private land.

Funding for conservation. A major source of funding for the Model has been the investment by hunters and anglers in both state and provincial license fees and through various federal tax programs (in the U.S.) such as Pittman-Robertson, Dingle-Johnson, and State Wildlife Grants legislation (see page 35). Substantial general revenue funding also supports wildlife conservation programs, although this is not often emphasized by hunter based organizations. Nevertheless, the declining participation in hunting and angling poses a severe economic challenge, particularly for state agencies. An expanded funding base is clearly required, and

dependable funding must become a mainstream of national, state, and provincial economies.

Lack of education. Perhaps the most glaring failure of the North American Model is the consistent lack of any effective educational outreach. While efforts targeting specific local problems or constituencies have been increasing, it remains an inconvenient truth that Model supporters seemingly will not engage in any strategic public outreach. Without it, the public remains ignorant of the Model and many therefore believe that hunting and conservation are contradictory terms. Without understanding the Model, the public may fail to understand that healthy wildlife populations and habitats equate to human health and satisfaction. They may also believe that wildlife exists by accident, and think that displacing humans from ecosystems will only benefit wildlife. Nothing in conservation can be more important than effectively communicating the Model's principles and building public support.

Be Prepared for Change

The North American Model has faced many challenges over the last 100 years, yet has proven resilient over that arduous journey. The economic and societal trends we now face, however, leave little doubt that the Model is experiencing perhaps its greatest period of challenge. While we may take strength from the Model's history, we cannot underestimate these threats to its future. What may arguably be the world's best experiment in conservation is not invulnerable. It is at risk and its collapse is possible.

Avoiding this tragedy will require more than simply a defence of the perimeter or an appeal to history. We must be prepared to adapt and to engage at all levels of society. Inclusivity, and the degree to which we can achieve this, will determine the North American Model's future. What's won is won; but whether we can keep wildlife with us in the 21st century depends on how broadly we will think, how deeply we will feel, and how magnanimously we will act. We must be prepared to re-evaluate even the most basic principles of the Model if this is what is required. No environment stays constant forever, but a forever without wildlife would be intolerable. ■