

Project Overview

- Title:** **Biomass, Economic Valuation and Ecological Replacement Costs of Wild Protein Harvest in the United States and Canada.**
- Issue:** *Conservation Visions Inc.* has proposed conducting the first comprehensive evaluation of wild animal harvest by recreational hunters and anglers in Canada and the United States. Using standardized scientific protocols, the biomass, economic value, and ecological replacement costs of the current harvest of wild animal protein will be assessed. The project is intended to provide empirical support for conservation of lands and waters, and to help build a coalition of interests surrounding healthy food, sustainable resource use, and support for enhanced public policy in the land management and wildlife conservation sectors.
- Context:** The harvest and consumption of wildlife has been, and remains, an integral part of human existence that is critical to the diet, economies, cultures, and livelihoods of billions of people worldwide. While commercial fisheries are accepted as critical to modern society, recreational wildlife harvests are often considered unimportant from a health and nutritional point of view. Every year in the United States an estimated 14 million hunters and 33 million anglers participate in wild protein harvests, and 1.5 million hunters and nearly 4 million anglers do so in Canada. Furthermore, an unknown number of First Nations hunters and fishers harvest wild fish and wildlife to meet food needs as part of longstanding cultural practices. Despite numerous evaluations of the significant economic impact of these recreational activities, little effort has been made to assess the biomass or economic and nutritional values of the meat and fish that are harvested and consumed. Furthermore, it seems no one has posed the question of what it would cost to replace this food through expansion of existing agricultural and livestock production. In addition to addressing the policy frameworks that govern how access to this wild food is regulated, the *“Wild Harvest Initiative”* will help to reframe the debate over the modern relevance of hunting and angling by addressing how recreational harvests of wild food relate to food security and global research and policy priorities.
- Synopsis:** This Initiative will amalgamate the fish and wildlife harvest data available from provincial, state, and federal agencies, as well as from appropriate NGOs in Canada and the United States. These data will be combined with existing socio-economic data to provide a full estimate of the economic, nutritional, and livelihoods contributions of the wild harvest derived through recreational hunting and angling in Canada and the United States. These results will be used to calculate the costs of replacing wild food with agriculture models. Further, the potential to incorporate data on indigenous harvests will be explored through communication and collaboration with First Nations institutions.
- Approach:** The project will proceed on a multi-year basis and will require both financial and academic resources to bring to fruition. Conservation Visions will provide overall lead and direction. Guidance will be provided through a Senior Advisory Team comprised of several supporting American and Canadian organizations/jurisdictions. Developing a much wider support structure beyond hunting organizations and business interests will be a priority and will include health and agricultural organizations and food security interests. Annual reports will be available at the end of each year with regular updates provided on a quarterly basis. Academic engagement and graduate student involvement will be encouraged to ensure scientific credibility and peer-reviewed publication of results. The initial phase of the project will center on two Canadian and two American jurisdictions and will be used to establish and refine protocols, data acquisition methods, conduct preliminary analyses and to formulate specific graduate student efforts. This work is scheduled to commence in the fall of 2015.



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Mahoney, S.P., Conservation Visions 2015. Funding Proposal. Biomass Economic Valuation and Ecological Replacement Costs of Wild Protein Harvest in the United States and Canada. Summary.

Relevance: Food security is an issue of increasing concern globally, and in North America recreational wild protein harvest can be viewed as one of the most ecologically sustainable and environmentally friendly food procurement practices. Such wild harvests avoid the often destructive land and aquatic use practices of large scale agriculture, while at the same time contributing significantly to the economies and livelihoods of millions of people.

One reason for the wildlife recovery and conservation success realized in Canada and the United States has been the implementation of The North American Model of Wildlife Conservation, which promotes democratic access to, and sustainable utilization of wildlife as a renewable source of high quality food. By providing an empirical evaluation of the scale and economic value of this harvest, this study will provide an important additional perspective to issues of land and water management, and help value wildlife as an ecosystem commodity that must be taken into consideration when decisions of land use policy are considered. The study will also help identify the policy and guidance structures that enable wild harvest to be sustained and accessed in an equitable fashion. Globally, it will provide a “good practice” example that demonstrates the potential for sustainable use of wildlife to contribute to human food needs while maintaining thriving wildlife populations.

Deliverables: (1). *An Estimate of Wild Protein Harvest for the United States and Canada.*
Once compiled and edited, the data will be analyzed at various scales to identify continental and regional, as well as species level, harvest patterns. This will provide the basic information as to how many animals are harvested, and the average meat provision per animal will then be used to develop a cumulative harvest biomass for both Canada and the United States.

(2). *A Quantification of Wild Harvest Contribution to Protein Consumption.*
Using the total wild meat/fish harvest figures, we will provide an assessment of the contribution wild harvest makes to the overall protein intake of both countries.

(3). *Quantify the Economic Value of Wild Animal Protein.*
Using economic models from agriculture and food price index equivalents, the economic value of the harvested meat will be established through recognized comparative methods and based upon reasonable fair market value. This will provide, for the very first time, a financial valuation of the overall wild meat harvest by hunters and anglers in North America.

(4). *Quantify Agricultural Equivalents and Costs to Replace Wild Protein Harvest.*
The fourth project deliverable will be an assessment of what it would require to replace the protein provided through hunting and angling, based upon meat equivalents raised as domestic livestock. This will likely demonstrate that hunting and angling provides substantial animal protein that otherwise must be provided through means that are financially and environmentally far less sustainable.

Implications: The study will provide many valuable outcomes:

- 1.) Understanding the importance of wild meat to livelihoods and economies is a global concern, especially for leading international social and political institutions, such as the International Union for the Conservation of Nature (IUCN), the Convention on Biological Diversity, and the Collaborative Partnership on Wildlife. Results will be disseminated to these bodies to inform practice and policy globally.
- 2.) Measuring the scale and replacement cost of wild meat harvest will demonstrate that public and private lands and waters that provide wildlife production actually ensure, at the same time, a secure and cost-effective source of food.
- 3.) The *Wild Harvest Initiative* may increase the public awareness of the importance of wildlife habitat and help to mobilize greater efforts for its protection.
- 4.) The *Wild Harvest Initiative* will enable managers and policy makers to develop best practices for access to wild protein resources, and for benefits sharing.
- 5.) The North American Model, which supports equitable human access to wildlife, has been incredibly successful. How access to wild food is



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- governed will be of paramount importance to the future of hunting and angling.
- 6.) The *Wild Harvest Initiative* will help mobilize understanding of working wildlife models throughout developed regions of the world where effective and sustainable wildlife harvest has been maintained.
 - 7.) The *Wild Harvest Initiative* will provide common ground for discussions and public engagement in wildlife conservation issues, and will lead to wider and more effective coalitions on behalf of wildlife.

Partnering: Many diverse organizations are being invited to join this effort. These partners will be announced once participation has been confirmed.

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