



Vermont: Safeguarding Wildlife From Global Warming

Global warming is the greatest threat to wildlife and natural resources across the world and in the United States. Vermont is already experiencing higher average temperatures, more-extreme weather events such as heat waves and heavy downpours, and the expansion of invasive species. The extent and composition of forest systems across the state are expected to change, with both economic and ecological consequences. Globally, the Intergovernmental Panel on Climate Change has concluded that thousands of species will be committed to extinction within our children's lifetime if we continue on a "business as usual" trajectory of greenhouse gas emissions.

Fortunately, we still have a chance to avert disaster. Citizens and governments worldwide are rallying to support strong climate legislation. In the United

States, President Obama and leaders in Congress are calling for a cap-and-trade system to limit global warming pollution and shift the U.S. toward a clean energy economy. However, the global warming pollution already in our atmosphere will continue to alter the climate for centuries to come. By developing strategies to assess and address local climate impacts, we can still prevent the worst damage to our natural systems.



Owl's Head — Dorset, VT

and natural resources from global warming, these strategies and projects will need to be implemented at an unprecedented scale. This will take a new dedicated funding stream to allow for long-term planning. Cap and trade legislation must invest in protecting wildlife and

Regional groups and agencies across the country are already at work on these strategies. Incorporating climate science into their projects, they are showcasing a fresh approach to conservation. But to protect wildlife

Critical Paths For Wildlife

Vermont is famous for its beautiful scenery and for animals like moose and Canada lynx. However, these and other wildlife are increasingly threatened by global warming. A number of species in Vermont rely on safe road crossings to move within their core habitat. Many species will require better north-south connectivity to be able to migrate in latitude and better all around connectivity to migrate in elevation as Vermont's climate warms. Autumn leaf watchers aren't the only ones using the state's roads, however, as thousands of driving collisions involving deer, moose and other wildlife occur every year.

To give animals a chance, National Wildlife Federation (NWF), in partnership with the Vermont Natural Resources Council and the Vermont Fish and Wildlife Department, is carrying out the Critical Paths for Wildlife project. The groups hope to maintain natural wildlife migration corridors by prioritizing critical north-south wildlife road crossings in the state, particularly along the spine of the Green Mountains.

NWF's George Gay stresses the importance of creating a permeable landscape. "One of the challenges of a chang-



ing climate” says Gay, “is predicting where wildlife will need to go.” Critical Paths uses cutting-edge modeling and on-site analysis to determine where there are bottlenecks and impermeable crossings. Road crews have installed a range of features such as culverts and underpasses with shelves for animals to traverse. Other methods include blinking signage, strategic gaps in guardrails and barriers, and redesigned bridges to increase wildlife mobility.



The year-old initiative is scheduled to wrap up this summer. Jens Hilke, a biologist with the Vermont Fish and Wildlife Department, says that the next big step is going east-to-west. The partnership plans to use the Critical Paths strategy to link habitat from the Green Mountains to the Northeast Kingdom. The project is just one way to give wildlife a better chance to survive in an increasingly-partitioned and warming environment.

Natural Resources: An Economic Driver in Vermont

Protecting natural resources is a moral imperative that makes business sense, too. **6,300 Vermont jobs are directly linked to wildlife, and consumers spend over \$383 million annually on wildlife-related recreation in the state.** Hunting, fishing, and wildlife watching are also important elements of Vermont’s cultural heritage and economic base. Projects like Critical Paths are essential to maintaining these benefits and the intangible rewards of healthy plant and animal communities. “Wildlife in New England has rebounded dramatically over the last few decades,” says NWF’s George Gay. “We need to emphasize better planning, so that climate change doesn’t reverse this trend.”

The direct relationship between habitat health and economic health is great news: it means we can boost our economy while protecting wildlife, two things everyone can agree on. Federal legislation recently passed by the US House of Representatives allocated around \$6 million annually for state-based conservation programs in Vermont. Given the size of the problem and the opportunities for remediation, funding on this scale is necessary to safeguard our natural resources against global warming.

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