

**Wilderness Conservation in an Era of Climate Change:  
Canada's Global Responsibility**

**CPAWS' Recommendations for Federal Action**

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## **Wilderness Conservation in an Era of Climate Change: Canada's Global Responsibility**

### **CPAWS' Recommendations for Federal Action**

#### **In an era of climate change, wilderness conservation is critical:**

There is strong scientific consensus that human-caused climate change is already harming the health of the earth's ecosystems, our planet's life support system. Along with the widespread loss and fragmentation of habitat caused by human activities, climate change is threatening the survival of species on land and in our oceans, lakes and rivers. "If the current rate of biodiversity loss continues, we will experience the most extreme extinction event in the past 65 million years," according to scientists.<sup>1</sup>

To optimize the survival of healthy ecosystems in this era of climate change, Canada needs to take immediate and decisive action to reduce our greenhouse gas emissions.<sup>2</sup> It is equally important that we act now to protect our remaining wilderness.

Canada's wilderness is vital to Canadians and to the world as a source of clean air, clean water and a vast carbon storage reservoir. We are stewards of 20% of the earth's remaining large intact spaces and home to the world's longest coastline. By protecting our wilderness, we will protect the carbon stored within it, and we will allow plant and animal species to respond to the changing climate.

#### **How should the federal government respond?**

In an era of climate change, the federal government should:

1. Include land, ocean and freshwater **wilderness conservation** as part of a comprehensive strategy to address climate change;
2. Protect large ecosystems in **Canada's North** in advance of industrial development;
3. Complete the **national parks** system and other forms of federal protected areas across Canada, and ensure their connectivity and long term ecological integrity;
4. Protect **ocean and freshwater ecosystems** through better planning and management of human activities, and reducing the most harmful activities like bottom trawling;
5. Complete Canada's network of **marine protected areas**, including national marine conservation areas and marine wildlife areas in the Arctic, Atlantic, and Pacific Oceans and in our great freshwater lakes;
6. Protect and restore habitat for **species at risk**.

<sup>1</sup> Hilty, J., W Lidicker Jr, A. Merenlender, Corridor Ecology, Island Press, Washington, 2006, p. 9

<sup>2</sup> IPCC (2007). Climate change 2007: The physical science basis - Summary for policymakers. Paris, France, United Nations, UNEP, Intergovernmental Panel on Climate Change (IPCC), Working Group I.

## 1. Wilderness conservation in the fight against climate change

Climate change is the leading threat to Canada's ecosystems and our economic prosperity. Our cultural identity is inextricably linked to our wilderness lands and waters and climate change now threatens them both. We need to reduce greenhouse gas emissions. But we also need to address changes that are already occurring in our ecosystems and will continue into the foreseeable future due to climate change.

Careless human development in intact wild ecosystems has been a significant historic contributor to climate change.<sup>3</sup> For example, the large-scale deforestation of southeastern Canada over the past century has released millions of tons of carbon into the atmosphere and reduced regional biodiversity. Today, significant emissions from our forest activities continue as more and more of Canada's natural forests are converted into managed forests, which store much less carbon. Luckily, Canada still has significant intact ecosystems. Protecting them will help to moderate climate change by reserving the vast stores of carbon and other greenhouse gases found in and under these forests.

Reducing the rate and extent of human-caused disturbance to natural ecosystems will also decrease the overall stresses they face due to the increasing intensity of natural disturbances such as hurricanes, droughts, fires and insect infestations.

### Recommendations:

The Government of Canada should include the following as part of its climate change strategy to conserve our remaining wilderness:

- 1.1 **Mitigation measures** – cap and reduce direct emissions of greenhouse gases and protect the significant carbon stores reserved in intact ecosystems;
- 1.2 **Adaptation measures** - prioritize the protection of intact ecosystems; maintain and restore habitat connectivity between these areas and reduce the overall rate of disturbance by industrial activity to accommodate the response of ecosystems and species to climate change.

## 2. Canada's North

Canada's northern ecosystems are the most heavily impacted by climate change in our nation. Because of its location and governance, the Northwest Territories offer the single best opportunity for the federal government to make immediate progress in conserving vital northern ecosystems -- still largely intact but increasingly threatened by industrial development.

The federal government needs to work with other parties including First Nations, industry and non-governmental organizations to protect northern ecosystems through two

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<sup>3</sup> IPCC. (2000). Land use, land-use change, and forestry. Cambridge, UK, Cambridge University Press for the Intergovernmental Panel on Climate Change (IPCC)

principle means: establishing a network of protected areas through the NWT Protected Areas Strategy and national parks initiatives, and completing and implementing land-use plans. It is urgent that these actions be completed now, before pending industrial development makes them impossible. This protection will reduce the vulnerability of species and ecosystems and also provide refuge for species whose ranges are shifting northward in response to climate change.

### **Recommendations:**

Before approving any large-scale developments, the federal government should safeguard northern ecosystems by conducting the following activities:

**2.1 Protected Areas:** Complete a long-standing federal commitment to establish a network of protected areas through the NWT Protected Areas Strategy and national parks initiatives. This requires securing interim protection for candidate protected areas, and providing permanent protection for sites already under interim protection such as the South Nahanni watershed, Edézhzie, and Sahoyúé ehdacho.<sup>4</sup>

**2.2 Land Use Plans:** Complete, approve and begin implementation of regional land use plans in the Dehcho and Sahtu regions, including withdrawing lands identified for conservation from any industrial allocations. Both of these plans, if enacted, will set groundbreaking examples of conservation-first land use for some of the world's most critical remaining large, intact, wilderness ecosystems.

## **3. Parks and other protected areas across Canada**

National, provincial and territorial parks are an immense source of pride for Canadians. They provide a wide range of irreplaceable benefits including:

- Protecting ecological services such as regulating the climate, cleaning the air and our water that are worth billions of dollars annually to Canadians and the world;
- Generating sustainable economic opportunities for communities – tourism generated by national parks and historic sites contributes \$1.5 billion in direct spending per year to the Canadian economy, five times the amount invested by the government to operate them;
- Providing a refuge for plants, animals and ecosystems responding to climate change and other human-caused pressures;
- Providing habitat protection for Canada's species at risk;
- Reinforcing Arctic sovereignty goals by enhancing Canadian presence in the North; and
- Providing a living laboratory for baseline studies against which to measure the magnitude of the effects of climate change and other human caused disturbances to the managed landscape.

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<sup>4</sup> South Nahanni watershed as an expanded national park reserve; Sahoyúé ehdacho (Grizzly Bear Mountain and Scented Grass Hills) as a National Historic Site; and Edézhzie (Horn Plateau) as a National Wildlife Area.

Canada has committed internationally to completing a system of terrestrial protected areas by 2010.

### **Recommendations:**

To secure the irreplaceable benefits of parks and other protected areas, the Government of Canada should act on the following:

- 3.1 National Parks** – Complete our national parks system and ensure the maintenance and restoration of ecological integrity in our existing parks<sup>5</sup>;
- 3.2 Environment Canada Protected Areas** – Clarify the vision and mandate for National Wildlife Areas and Migratory Bird Sanctuaries by reviewing their policy and legislative framework, and provide funds to create new protected areas and ensure their long-term protection and management;
- 3.3 Federal Terrestrial Protected Areas Plan** – Develop an integrated federal protected areas strategy to coordinate and clarify the vision, roles and responsibilities of the various federal agencies involved in terrestrial protected areas planning and management.

## **4. Ocean and freshwater ecosystems**

The scientific evidence is conclusive. Globally, marine ecosystems are imperiled. Recent studies have shown that 90% of all large fish in the sea are gone, and the greatest threat to marine biodiversity is over-fishing.<sup>6</sup> Meanwhile, the increased carbon dioxide causing climate change also threatens the ocean life by acidifying the water, raising sea levels and altering habitats.<sup>7</sup> In human history, marine ecosystems have never been under greater threat and in greater need of protection.

Scientists around the world have demonstrated the important benefits of establishing Marine Protected Areas (MPAs) to protect biodiversity, ensure resilience of marine systems, facilitate species response to climate change and enhance fishing opportunities.<sup>8</sup> Canada has powerful legal tools to establish Marine Protected Areas under the *Canada Oceans Act* (led by Fisheries and Oceans), the *Canada Wildlife Act* (Environment Canada) and the *Canada National Marine Conservation Areas Act* (Parks Canada).

Canada has committed internationally under the Convention on Biological Diversity to completing a national network of marine protected areas by 2012. But progress has been very slow. In the Arctic, the establishment of marine protected areas will both protect

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<sup>5</sup> In 2000, the blue-ribbon “Panel on the Ecological Integrity of Canada’s National Parks” released their report – “Unimpaired for Future Generations” which provided a blueprint for restoring and maintaining the ecological integrity of Canada’s national parks.

<sup>6</sup> See for eg, “Still Waters, The Global Fish Crisis”, National Geographic, April 2007

<sup>7</sup> Carbon dioxide dissolves in sea water producing carbonic acid which increases ocean acidity, dissolves coral reefs and damages the ability of sea life to produce cells and shells.

<sup>8</sup> See “Blue Haven”, National Geographic, April 2007, pp. 71 - 90

areas of high biodiversity and contribute to Canada's sovereignty goals by enhancing our presence in the region.

Environment Canada, Parks Canada and the Fisheries and Oceans Canada all need to dramatically accelerate their work so that we can meet our commitment to complete a national network of marine protected areas by 2012.

### **Recommendations:**

To conserve Canada's marine ecosystems, the Government of Canada should act on the following:

**4.1 Marine Protected Areas** - Work with the provincial and territorial governments to complete a national network of marine protected areas in the Arctic, Atlantic and Pacific Oceans and Great Lakes by 2012.

**4.2 Marine Use Planning** - Complete the five marine use planning initiatives currently underway and identify additional marine regions for future planning initiatives that will lead to comprehensive ocean zoning.<sup>9</sup>

**4.3 Interim Protection Measures** – Ensure that ecologically significant areas on all of Canada's coasts are given interim protection from industrial practices that threaten their ecological integrity while MPAs and marine planning measures are put in place that will provide for their long term protection.

## **5. Species at risk**

Over 500 natural species of plants and animals within Canada have already gone extinct and hundreds more are at risk of extinction due primarily to habitat loss.<sup>10</sup> Climate change adds and compounds stresses on already vulnerable species and their habitats. Completing a connected network of protected areas in Canada is essential for the survival and recovery of these species at risk.

The federal *Species at Risk Act* passed in 2002 has not yet proven whether it will be effective in saving species at risk of extinction. But the Act does offer the tool for the government to ensure that at-risk species have maximum chances for survival and recovery. Under the Act, the federal government should work to restore healthy

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<sup>9</sup> The current marine planning initiatives include: Pacific North Coast, Beaufort Sea, Eastern Scotian Shelf, Placentia Bay/Grand Banks and Gulf of St. Lawrence and one is slated for the west coast of Vancouver Island.

<sup>10</sup> Venter, O., N. Brodeur, et al. (2006). "Threats to endangered species in Canada." *BioScience* 56(11): 1-8. and Kerr, J. T. and J. Cihlar (2004). "Patterns and causes of species endangerment in Canada." *Ecological Applications* 14(3): 743-753.

populations of Canada's at risk plants and animals by developing and implementing effective recovery plans that identify critical habitat and outline steps to protect it.<sup>11</sup>

### **Recommendations:**

To save wild species at risk, the Government of Canada should:

- 5.1 Require that *Species at Risk Act* recovery strategies delineate "critical habitat";
- 5.2 Require that *Species at Risk Act* action plans identify mechanisms to protect "critical habitat" for at-risk plants and animals, including establishment of new protected areas; and,
- 5.3 Establish clear timelines for completion of *Species at Risk Act* action plans, while placing a moratorium on industrial development in identified "critical habitat" until those action plans are implemented.

### **In Conclusion:**

Canada has an urgent responsibility to save our wilderness ecosystems because of their vital contribution to sustaining life on earth. Climate change compounds the need for the federal government to commit resources to wilderness protection now. We are among the most prosperous nations in the world. There is no excuse for inaction.

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*CPAWS is Canada's voice for wilderness. Established in 1963, CPAWS has been instrumental in protecting over 400,000 km<sup>2</sup> of Canada's most treasured wild places, including Pacific Rim, Killarney, Nahanni, Kluane, Pukaskwa and Gwaii Haanas. Today CPAWS has 13 chapters covering nearly every province and territory and is in regular contact with 40,000 supporters across Canada.*

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<sup>11</sup> U.S. experience has shown that the completion of recovery strategies and maps of critical habitat are the most effective mechanism for species survival and recovery: Taylor, M. J. F., K. F. Suckling, et al. (2005). "The effectiveness of the *Endangered Species Act*: A quantitative analysis." *BioScience* 55(4): 360-367.