

A photograph of a caribou with large, dark antlers standing in a lush green field. The caribou is facing right, and its body is a mix of brown and white fur. The background is a dense field of tall grass and some small yellow flowers.

POPULATION CRITICAL:

How are Caribou Faring?

First annual report
on governments'
efforts to conserve
Canada's declining
Boreal caribou
populations

December 2013



CPAWS
CANADIAN PARKS AND WILDERNESS SOCIETY



David
Suzuki
Foundation

SOLUTIONS ARE IN OUR NATURE

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BOREAL CARIBOU
POPULATION CRITICAL

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Executive Summary



Boreal woodland caribou once inhabited over half of Canada, but today they remain only in our northern boreal forests and wetlands. In the last century over half their historic range has been lost.¹ The biggest risk to caribou is industrial development, which fragments their habitat and exposes them to greater predation. Scientists consider only 30% (17 of 57) of Canada's boreal woodland caribou populations to be self-sustaining.² The future of boreal woodland caribou is uncertain, and without effective habitat conservation and recovery measures, many of Canada's caribou populations are faced with likely local extinction.

¹ Hummel, M. and J. Ray. *Caribou and the North: A Shared Future*. Toronto: Dundurn Press, 2008

² Environment Canada (2012:47) describes a self-sustaining local population as: a local population of boreal caribou that on average demonstrates stable or positive population growth over the short-term (≤ 20 years), and is large enough to withstand stochastic events and persist over the long-term (≥ 50 years), without the need for ongoing active management intervention.

Photo: Ron Thiessen

Executive Summary



Because their numbers have declined so significantly, boreal woodland caribou are listed as threatened under the federal *Species-at-Risk Act* (SARA), and Environment Canada issued a national Recovery Strategy for the species in November 2012.³ The Recovery Strategy is based on rigorous science and Indigenous traditional knowledge. It identifies the protection of large intact forests as the key to caribou survival, and sets a deadline of three to five years for the nine provinces and territories where boreal woodland caribou are still found to create plans for each caribou range to reverse their slide toward local extinction.

With a year now passed since the release of the federal boreal woodland caribou Recovery Strategy, CPAWS and DSF are issuing the first annual report assessing the progress these nine provincial and territorial jurisdictions have made in addressing caribou conservation, and whether or not they are taking the necessary steps to begin a reversal in the trend towards local extinction that boreal caribou are facing. We are paying careful attention to whether the provinces and territories are incorporating the scientific and traditional knowledge upon which the federal Recovery Strategy is based into their efforts to create caribou conservation plans.

To develop our analysis, we sent a standardized questionnaire to the provinces and territories with a responsibility to manage boreal woodland caribou, as well as to the federal government. We also drew upon our direct experience participating in caribou conservation processes with governments across the country and our on-going review of government conservation efforts.

Our analysis shows that most provinces and territories are lagging in meeting their responsibility to protect this species. Three jurisdictions, the Northwest Territories, Manitoba and Saskatchewan, are graded “medium” as they show some welcome signs of progress. The remaining six jurisdictions — the Yukon, British Columbia, Alberta, Ontario, Québec, and Newfoundland and Labrador — get low grades for overall performance in developing and implementing effective caribou conservation measures.

We identified five key problems in our assessment of the various jurisdictions in Canada:

- **IMPLEMENTATION REMAINS A CHALLENGE.** Political will is needed to overcome the disconnect between good plans and implementation. For example, there is excellent caribou research in Alberta and Québec, and strong provincial recovery plans are in place in Québec and Ontario, yet actions to stop and reduce threats to caribou habitat are lacking. In other places there is a severe lack of information (e.g., Saskatchewan), uncertainty with respect to habitat protection options (e.g., NWT), or at worst, wanton disregard for public opinion and/or First Nation leadership (e.g., Yukon).

³ Environment Canada. 2012. Recovery Strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Boreal population, in Canada. *Species at Risk Act Recovery Strategy Series*. Environment Canada, Ottawa. xi + 138pp.

Photo: Ted Simonett

Executive Summary



- **ADDITIONAL FEDERAL GUIDANCE IS NEEDED.** It is incumbent upon the federal government to ensure that the provinces and territories have the necessary science-based tools at their disposal to effectively develop and implement range plans for caribou recovery. One key area where federal policy support is needed is further guidance to assess the characteristics of undisturbed habitat and the biophysical habitat attributes required for caribou to carry out their normal life processes.
- **GAPS IN PROVINCIAL AND TERRITORIAL LEGISLATION.** Our assessment is that all jurisdictions require strong regulatory tools and policies to guide development of effective boreal woodland caribou recovery plans and the political will to implement them where they exist. There are several with gaps that need to be remedied including jurisdictions that do not have stand-alone species at risk legislation: British Columbia, Alberta and Saskatchewan.
- **LACK OF CUMULATIVE EFFECTS ASSESSMENT AND INCORPORATION INTO APPROVALS PROCESSES.** Looking across the country, to date there is no clear example of any of the provinces or territories successfully applying a cumulative effects lens to planning approval processes. This must be overcome immediately or it will be difficult to achieve boreal woodland caribou recovery objectives.
- **PREDATOR MANAGEMENT CONCERNS** (in some jurisdictions only). Predator management is a sanitized way of describing the killing of wolves and/or other predators such as black bears and coyotes. Predator management in the absence of meaningful habitat protection and restoration is not a viable solution, and may further disrupt the natural balance of functioning ecosystems. Predator 'management' must be accompanied by effective habitat protection and restoration measures. Fortunately, at present, predator management is only being practiced in isolated cases.

We strongly urge all the jurisdictions to make good on their commitments and to speed up implementation to protect and recover woodland caribou in Canada.

We also recommend that the federal government provide more leadership. For example, to facilitate provincial and territorial action planning it is important for the federal government to provide to the provinces and territories further guidance on how to assess "undisturbed habitat", and the biophysical attributes of habitat required for caribou to carry out their life processes.

Boreal woodland caribou in Canada are in trouble. Of the 57 boreal woodland caribou populations in the country, only 17 are considered to be self-sustaining. Some, like the Little Smoky herd in Alberta, are on the verge of extirpation (local extinction). Industrial disturbances within caribou ranges are the underlying cause of the steep declines in woodland caribou abundance across the country.

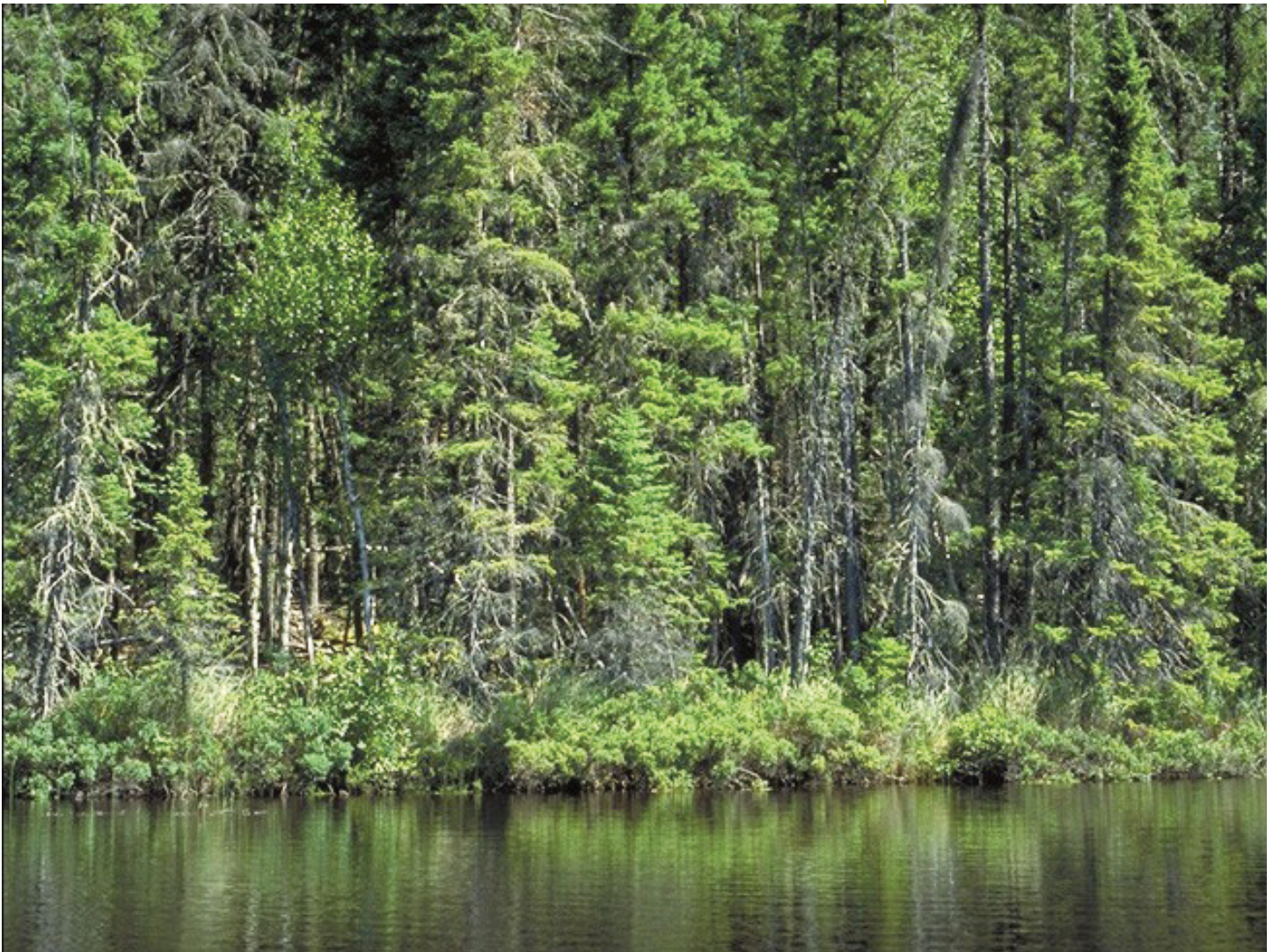
The purpose of this report is to determine if the provinces and territories are taking the necessary steps to protect boreal woodland caribou. This report marks the start of an annual review of provincial and territorial progress toward developing and implementing effective and meaningful caribou range plans in each jurisdiction.

Beginning in 2008, Environment Canada commissioned a number of important scientific studies to assess boreal woodland caribou populations and assist in the identification of critical habitat.⁴ These assessments showed a high degree of correlation between increases in industrial disturbance on the landscape and corresponding decreases in caribou calf recruitment associated with population declines.

Introduction

⁴ Environment Canada. 2008. Scientific review for the identification of critical habitat for woodland caribou (*Rangifer tarandus caribou*), boreal population, in Canada. Ottawa: Environment Canada. 72 pp. ; Environment Canada. 2011. Scientific assessment to inform the identification of critical habitat for woodland caribou (*Rangifer tarandus caribou*), boreal population, in Canada: 2011 update. Environment Canada. 102 pp.

Photo: Gregor Beck



Introduction

Boreal caribou are threatened with local extinction primarily due to habitat loss and fragmentation from industrial resource extraction activities and the resulting changes in predator/prey dynamics that ensue. Industrial activities facilitate access to previously intact landscapes through incursions such as roads, seismic lines, forestry operations, and utility corridors by predators such as wolves and black bears, which consequently prey on caribou. Regenerating the forest creates conditions that are also attractive to deer and moose, which indirectly compete with caribou, and make them increasingly vulnerable to predators. Thus, cumulative disturbances can tip predator/prey dynamics in favour of species other than caribou. Finally, the industrial activities themselves can also disturb caribou during critical periods of the year such as calving or over-wintering periods.

In response to the declining boreal woodland caribou populations, Environment Canada released a federal Recovery Strategy in November 2012 under the federal *Species at Risk Act* (SARA). The Strategy identifies the urgent need to control habitat loss and fragmentation within boreal woodland caribou ranges and provides direction for provinces and territories across Canada to develop range plans within the next 3-5 years. The Strategy also identifies the habitat caribou need to survive and recover (called 'critical habitat'). Critical habitat is defined in the Strategy as: "(1) the area within the boundary of each boreal caribou range that provides an overall ecological condition that will allow for an ongoing recruitment and retirement cycle of habitat, which maintains a perpetual state of a minimum of 65% of the area as undisturbed habitat; and (2) biophysical attributes required by boreal caribou to carry out life processes."⁵ The 65% threshold is associated with a 60% probability that a given caribou population is self-sustaining.

The federal Recovery Strategy also mandates that provinces and territories develop plans for each caribou range (called 'Range Plans' — see Appendix I). Provinces and territories have 3-5 years to complete range plans and these plans must include a demonstration of how *at least* 65% undisturbed habitat within each range will be restored and/or maintained over time. Given that the 35% disturbance threshold is a maximum, setting tighter limits on disturbance should provide even higher probabilities of long-term caribou persistence on the landscape.

Boreal woodland caribou in Canada are found in the Yukon, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec, and Labrador. Distinct populations of woodland caribou also occur in mountainous regions of Western Canada, the Gaspé Peninsula of Québec, and the Island of Newfoundland, but under the federal *Species at Risk Act* these are not considered to be boreal woodland caribou, rather they are identified as distinct populations and are undergoing separate recovery processes.⁶



⁵ Environment Canada (2012: 32)

⁶ Under the *Species at Risk Act*, woodland caribou are divided into distinct populations: Boreal, Northern Mountain, Southern Mountain, Atlantic - Gaspésie, and Newfoundland.

Photo: Ted Simonett

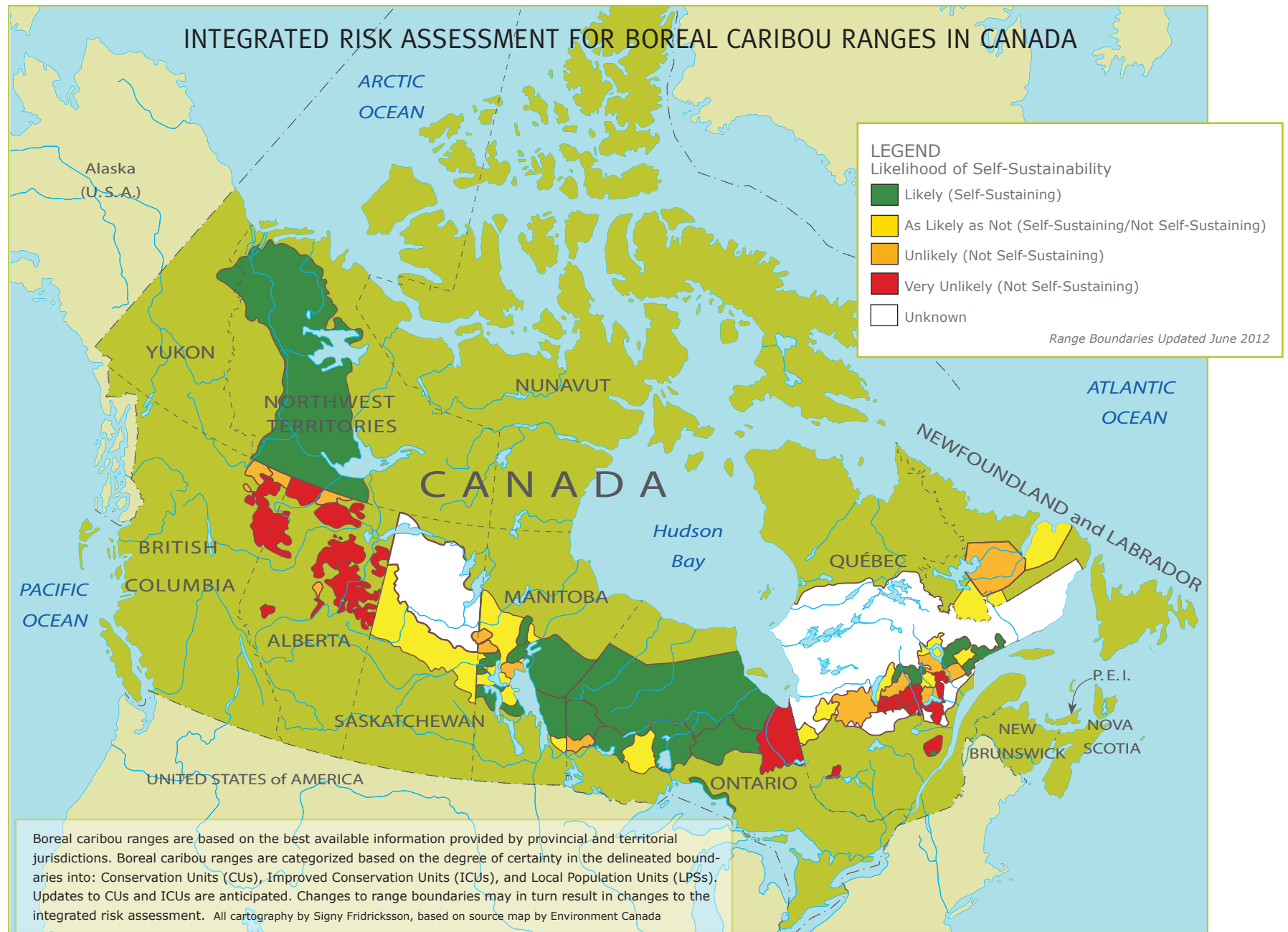


Figure 1: Integrated risk assessment for boreal caribou ranges in Canada, reflecting the capacity of each range to maintain a self-sustaining local population of boreal caribou (Environment Canada 2012:8).

Methods



To assess provincial and territorial progress to protect boreal woodland caribou, we developed a checklist of 15 key questions and submitted this to the provincial and territorial governments (See Appendix II). We also submitted a questionnaire to the federal government (See Appendix III). Conservation staff from our two organizations, including individuals from each of the provincial and territorial jurisdictions, reviewed the responses that were received. They also took into account their own knowledge of the processes that are occurring in each jurisdiction, based on their direct engagement and conversations with government representatives and on-going review of government conservation efforts. An overall grade of low/medium/high was assigned to each jurisdiction to indicate if the necessary steps are being taken to protect the species.

HOW MUCH PROGRESS ARE PROVINCES AND TERRITORIES MAKING TO CONSERVE BOREAL WOODLAND CARIBOU?

	Action Plan or Recovery Strategy in place?	Stand alone provincial SAR ¹ Legislation?	Caribou listed under stand alone SAR legislation?	Problem with over reliance on predator management?	Application of a cumulative effects lens linked to approvals?	Challenges implementing plans & policies?	Grade	Supporting Information for Grade
Yukon	no	no	no	no	no	yes	LOW	No protection in areas where there is heavy oil & gas exploration; Yukon government resists First Nation and public calls to protect Peel watershed putting local caribou at risk.
NWT	yes	yes	no; listing decision December 2013	no	no	In the process of Implementation	MEDIUM	Signs of positive steps with 2010-2015 Action Plan for Boreal Woodland Caribou
BC	yes but inadequate	no	n/a	not yet ²	no	yes	LOW	B.C.'s Boreal Caribou Implementation Plan is inadequate because it accepts continued caribou decline in all boreal caribou ranges rather than maintenance or enhancement of self-sustaining populations. It defers recovery to the future and essentially accepts the extirpation of two of B.C.'s six boreal caribou herds and lacks strong caribou habitat protection in a region with a large footprint by the oil and gas sector's development and tenure.
Alberta	in development	no	n/a	yes	no	yes	LOW	All populations are at elevated risk of continued pressure from oil & gas, and forestry; habitat protection measures lacking.
Saskatchewan	in development	no	n/a	no	in development	yes	MEDIUM	Province has committed resources to fill information gaps; lacks stand alone legislation.
Manitoba	no but imminent	yes	yes	no	no	yes	MEDIUM	We expect Recovery Strategy to be released soon. It is anticipated to set apart Manitoba by committing to conserve large areas of intact forest.
Ontario	yes	yes	yes	no	no ³	yes	LOW	Despite good intentions, Ontario has faltered badly on implementation over 4 years. Industrial development not curtailed in ranges that exceed or are close to exceeding management thresholds. Situation exacerbated by recent efforts to weaken protections for species at risk through regulation under ESA.
Quebec	yes	yes	yes	no	no	yes	LOW	Implementation remains uncertain in Quebec at this time. Major disconnect between recovery team efforts and government authorities.
NFLD Labrador	yes but out of date	yes	yes	yes on Island of NFLD	no	yes	LOW	Recovery plan is out of date. Over emphasis on predator control. Big hydro project in Lower Churchill may result in loss of habitat. NFLD fails to identify and delineate critical habitat for boreal herds of woodland caribou.

¹Species at Risk

²Implementation Plan calls for predator management

³Ontario promised one in 2009 and again in 2013 but there is little description of how it will be achieved and track record of Ontario up until this point is not good on implementation.

YUKON

Boreal woodland caribou ranges occur in two areas of the Yukon – the very southeastern corner of the territory and the northeast portion of the Peel River watershed. The northern mountain caribou and the barren ground caribou occupy the rest of the territory. Yukon Government's Department of Environment has active, ongoing programs for management of northern mountain caribou in the territory and works with the Porcupine Caribou Management Board on management of the Porcupine barren ground herd, but very little work has been done regarding the territory's boreal woodland caribou in the two areas where they reside.

There is no land use plan for the southeastern corner of the territory which overlaps the Liard Basin and is rapidly being disturbed by oil and gas exploration and therefore no process in place for identifying and protecting important habitat for caribou. The woodland caribou population within the Peel River watershed is also at risk. Despite overwhelming public and First Nations support for a final recommended land use plan released in July 2011 that would see 80% of the Peel watershed protected, the Yukon government has indicated it wants to open up the area to development, putting the local caribou at risk.



**GRADE
LOW**

LEGEND	
Likelihood of Self-Sustainability	
	Likely (Self-Sustaining)
	As Likely as Not (Self-Sustaining/Not Self-Sustaining)
	Unlikely (Not Self-Sustaining)
	Very Unlikely (Not Self-Sustaining)
	Unknown
<i>Range Boundaries Updated June 2012</i>	

NORTHWEST TERRITORIES

Boreal woodland caribou live in the forested landscape of the Mackenzie Valley of the NWT, east of the Mackenzie Mountains. The other populations of caribou within the NWT are classified either as “Barren Ground” or “Northern Mountain” and, while they too face challenges, they are not the subject of this report. The NWT population of boreal woodland caribou, has recently been determined by the NWT Species at Risk committee to be threatened and could soon be listed as a species at risk under territorial legislation. This means that a Recovery Strategy will be required soon, according to the regulatory timelines. In the meantime, the Northwest Territories government (GNWT) has already taken a number of encouraging steps to protect boreal woodland caribou.

Under a 2010-15 Action Plan for Boreal Woodland Caribou, the GNWT Department of Environment and Natural Resources is identifying important caribou habitat and developing management plans to limit the amount of disturbance within the caribou range. A protocol to measure and track habitat disturbance over time is being developed and engagement with partners such as regional renewable resource boards and hunter and trapper organizations is in the early stages. In addition to working on the range plan, the GNWT is designing a range-wide population monitoring program to determine if management plans are effective in maintaining self-sustaining caribou population. These proactive steps are encouraging signs that the GNWT is serious about caribou conservation and will be well positioned to contribute to the national recovery effort under the federal *Species at Risk Act*.

However, an area of worry is that the GNWT may be backing away from establishing large protected areas through the NWT Protected Area Strategy (PAS) process — a leading-edge multi-party initiative that provides the opportunity to protect important boreal caribou habitat within the next few years. In addition, hunting seasons may need to be reviewed to determine whether they are reflective of the SARA designation and sustainability goals for NWT’s boreal woodland caribou.



GRADE
MEDIUM

LEGEND
Likelihood of Self-Sustainability

- Likely (Self-Sustaining)
- As Likely as Not (Self-Sustaining/ Not Self-Sustaining)
- Unlikely (Not Self-Sustaining)
- Very Unlikely (Not Self-Sustaining)
- Unknown

Range Boundaries Updated June 2012

BRITISH COLUMBIA

Boreal woodland caribou are found only in the northeastern corner of British Columbia — an area that is also facing significant resource development pressures from the oil and gas industry including the burgeoning shale gas sector. In 2012, the B.C. government released the *Implementation Plan for the Ongoing Management of Boreal Caribou in British Columbia* (BCIP). In our view the plan is inadequate to ensure the recovery of all six of the boreal woodland caribou populations within this area. In fact, the plan only provides long-term recovery goals for four of the six populations — essentially writing off two herds - even though the federal Recovery Strategy deems recovery of all six populations to be feasible.

Furthermore, the government's plan describes its population and distribution goals for caribou herds in terms such as "significantly reduce the risk of boreal caribou extirpation" and "decrease the expected rate of decline", rather than in terms such as "recover self-sustaining populations". While the B.C. government has established wildlife-oriented designations (some temporary) over parts of boreal caribou range, in our view the measures required of industry in these areas are not strong enough to protect critical habitat. This is particularly problematic given that the oil and gas industry has a footprint that overlaps with 75 percent of boreal caribou habitat in the province.

B.C. does not have a standalone species-at-risk legislation. In the absence of such legislation, the measures taken by the province to date fail to prioritize the protection and restoration of boreal caribou habitat required to achieve recovery.

GRADE
LOW



LEGEND	
Likelihood of Self-Sustainability	
	Likely (Self-Sustaining)
	As Likely as Not (Self-Sustaining/ Not Self-Sustaining)
	Unlikely (Not Self-Sustaining)
	Very Unlikely (Not Self-Sustaining)
	Unknown
Range Boundaries Updated June 2012	

ALBERTA

Boreal woodland caribou in Alberta are under tremendous pressure from industrial activities, particularly from the oil and gas industry. All of the local populations are at elevated risk of extirpation due to rapid rates of habitat disturbance and fragmentation. This situation is exacerbated by continued pressure on the landscape from oil and gas exploration, forestry operations, including the large Forest Management Agreements in place for most public lands in the province, as well as aggressive logging to ease mountain pine beetle, which has led to dramatic increases in the size, scale, and speed of logging practices in the Rocky Mountain Foothills.

A considerable amount of caribou research has been undertaken in the province, and a lot of discussion has taken place among key stakeholder groups about how best to conserve boreal caribou, but habitat protection measures are still not being implemented. As a result, ranges are subject to continued disturbance and all 13 herds remaining in the province are in decline, with several at risk of immediate local extirpation.

As an extreme measure to keep the critically endangered Little Smoky and A La Peche herds alive in the Foothills region, the government has implemented a predator control strategy, which involves killing wolves, all the while continuing to allow industrial development activity. Unfortunately, the necessary habitat protection measures are not being implemented. Habitat loss and fragmentation are the root causes of caribou decline, and thus, to be effective, recovery initiatives need to focus, as a starting point, on adequate habitat protection and restoration measures.

There are some small, but notable steps being taken to protect boreal caribou in Alberta. For example, the Alberta government has applied some short-term forestry restrictions and stopped the sale of the remaining sub-surface energy leases within the Little Smoky caribou range while land-use planning occurs. This is the first time that the Alberta government has responded to requests from various sectors for a temporary moratorium on development during a planning process. However, this range is already more than 95% disturbed, and all previously approved industrial activity is still being allowed to continue.

The province is also continuing to take steps to develop caribou herd range plans required under the Boreal Woodland Caribou Recovery Strategy and to incorporate them into regional land-use planning initiatives. However it is too early to tell if the plans will result in significant land use policy changes, including sufficient caribou habitat protection and restoration.

GRADE
LOW

LEGEND

Likelihood of Self-Sustainability

- Likely (Self-Sustaining)
- As Likely as Not (Self-Sustaining/Not Self-Sustaining)
- Unlikely (Not Self-Sustaining)
- Very Unlikely (Not Self-Sustaining)
- Unknown

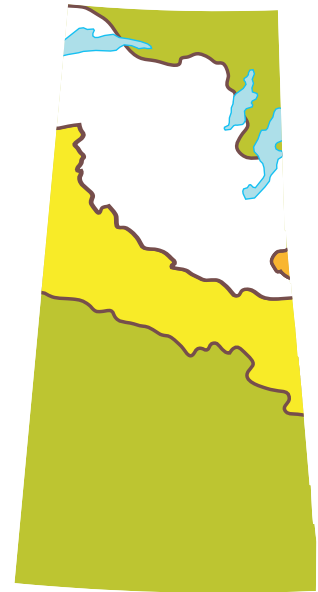
Range Boundaries Updated June 2012

SASKATCHEWAN

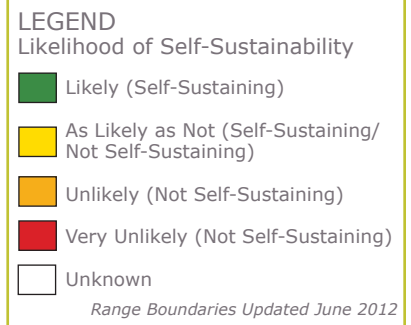
Boreal woodland caribou within Saskatchewan are found in the northern half of the province in the boreal forest. The federal Recovery Strategy for boreal woodland caribou identifies significant knowledge gaps in Saskatchewan, including uncertainty about the health and status of local caribou populations. While it is broadly accepted that woodland caribou are in decline in the boreal plain region, very little is known about populations in the boreal shield further north. As such, the federal Recovery Strategy gives Saskatchewan a three-year window to conduct studies to gain a better knowledge of caribou dynamics before identifying critical habitat in the boreal shield area.

Since that time, the Government of Saskatchewan has taken several important steps to fill these knowledge gaps, including committing resources to gauge the health of the boreal shield caribou populations and begin the process of developing range plans for the boreal plain populations. The Ministry of Environment is also in the final steps of developing a provincial recovery plan for boreal woodland caribou. A continuing challenge for caribou management is the lack of stand-alone provincial legislation for species-at-risk, which has led to delays in developing recovery measures. The province does have an endangered species list as an appendix to the *Wildlife Act*, but boreal woodland caribou are still not on this list.

Although Saskatchewan is still in serious need of better caribou information to make informed decisions, the province appears to be taking caribou conservation seriously and is off to a good start in developing a provincial Recovery Strategy and the range plan for the boreal plain.



GRADE
MEDIUM



MANITOBA

Boreal woodland caribou still inhabit the majority of their historical range in Manitoba but a significant band that used to be the southern part of their range is no longer inhabited by them due to human encroachment. The most notable area where they no longer occur is Whiteshell Provincial Park.

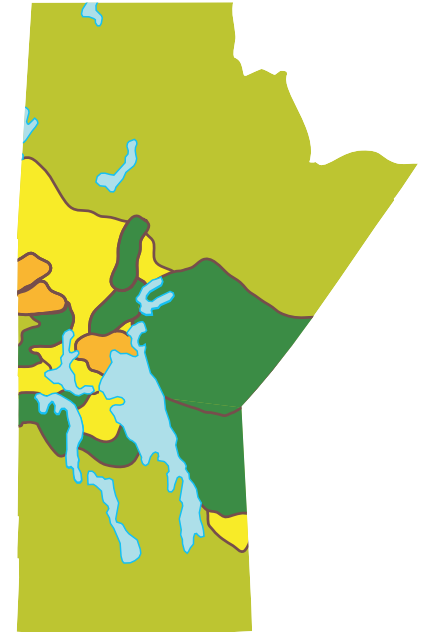
The province will soon be releasing a new boreal woodland caribou Recovery Strategy. According to our communications with the Manitoba Conservation Minister, the strategy sets a national precedent by identifying that conserving large, intact habitats is the cornerstone of keeping caribou on the landscape. The new provincial strategy is also expected to contain a commitment of maintaining at least 65%, and more where possible, of undisturbed habitat in all caribou management units.⁷

Manitoba, in partnership with local First Nations, has also already legally protected huge tracts of caribou habitat on the east side of Lake Winnipeg.

Under Manitoba's *Endangered Species Act*, persons are prohibited from destroying, disturbing or interfering with the habitat of a threatened species. Amendments to the Act before the Legislature will enhance Manitoba's ability to protect habitat.

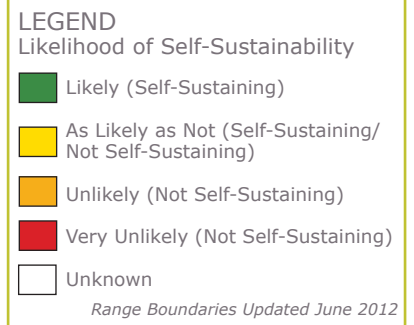
Manitoba also deserves credit for conducting research to monitor the health of caribou populations in the province. The government has over 200 collars in operation that track caribou movements to increase knowledge for developing protection measures.

As is the case with any solid strategy or plan, implementation is the key to success. There are other Canadian jurisdictions, such as Ontario and Quebec, that have developed conservation strategies for caribou but they are failing to live up to them. We look forward to reviewing the Recovery Strategy when it is released by Manitoba and hope it positions it well within the nation as a leader on caribou conservation. Next year we will begin reporting on the progress that is being made once the new strategy is released.



**GRADE
MEDIUM**

⁷ Management Unit: A geographical area that contains one or more caribou ranges to be managed for population sustainability, connectivity and habitat goals. Government of Manitoba



ONTARIO

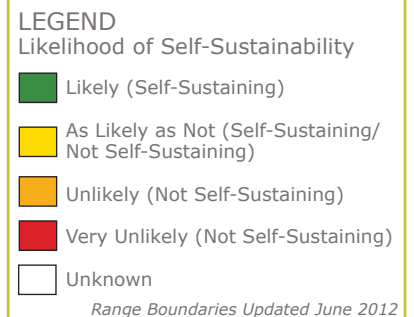
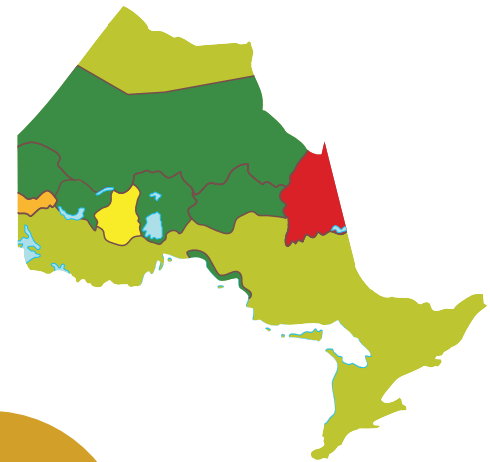
Ontario's Boreal woodland caribou are now confined to northern forests in the province. In 2009, the province developed a *Caribou Conservation Plan* (CCP) that required Ontario to manage and limit cumulative disturbances within boreal woodland caribou ranges. It was one of the first jurisdictions in Canada to adopt this forward-thinking approach. Unfortunately, since this plan was adopted, implementation has faltered badly.

In spite of the plan, resource development activities are still being approved in a piecemeal way in the province. The government is advising industrial proponents to avoid specific areas only, such as calving areas, without considering the big picture of how caribou are using the landscape. An upper limit on disturbance in ranges has yet to be proposed. Forest management plans continue to be approved that permit logging in intact habitat in caribou ranges irrespective of the state of the ranges or the health of local caribou populations.

The province has also recently enacted broad and sweeping exemptions for industry from the *Endangered Species Act* (ESA). As a result, the Ministry of Natural Resources (MNR) no longer retains adequate oversight to protect species or their habitats from harmful threats. Under the ESA, MNR has failed to use habitat regulations and permitting under the Act, which could help to achieve caribou conservation and make the 2009 CCP work and that could be consistent with Environment Canada's framework to protect critical habitat.

The Ontario government recently proposed a caribou Range Management Policy in 2013, however it is very weak on *how* to maintain/restore sufficient undisturbed habitat without exceeding thresholds of disturbance. A lone bright spot, MNR has conducted several caribou range assessments, but unfortunately has yet to make these public. Ontario needs to step up efforts to protect boreal caribou before cumulative impacts from industry jeopardize the long-term survival of this species. Otherwise, the well-intentioned and forward-looking 2009 Caribou Conservation Strategy will prove to be meaningless.

GRADE
LOW

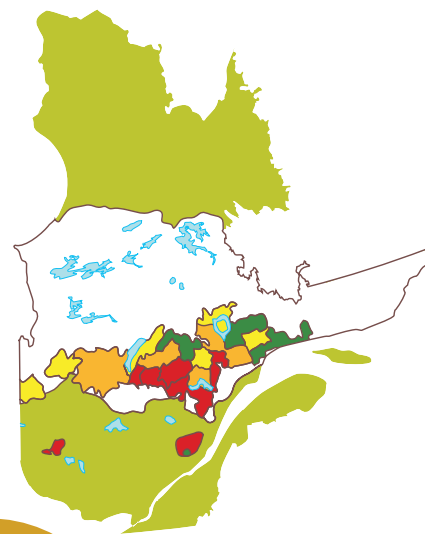


QUÉBEC

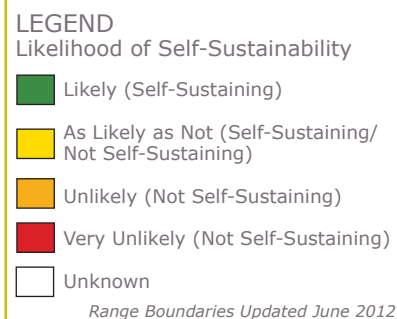
Boreal woodland caribou still range across the majority of Québec's northern boreal forest. The provincial government has developed the necessary tools to position itself as a leader in caribou conservation. Unfortunately, implementation of these tools is uncertain — at a time when habitat disturbance is increasing rapidly in many regions. If the government does not implement these tools, boreal woodland caribou populations will be at growing risk of extinction.

In 2013, Québec's woodland caribou recovery team released several important documents contributing to the protection of boreal caribou, including a *10-year Recovery Plan (2013-2023)*, as well as *Operational Guidelines for the Maintenance of Caribou Habitat*. Both the plan and the operational guidelines are scientifically sound and, largely based on the body of work produced by Environment Canada. They also included a cumulative effects framework for evaluating and mitigating the impacts of landscape-level disturbances on caribou population persistence. This offers a promising path forward toward effective caribou conservation and management in the province.

Nevertheless, a major disconnect remains between these tools, produced by the provincial woodland caribou recovery team, and their implementation by government authorities, which have no formal obligation to adopt them. For the time being, an inter-ministerial working group has been mandated to evaluate the potential socioeconomic and ecological tradeoffs of implementing the proposed measures. In the meantime, forest management plans and operations do not reflect the recovery team's main recommendations to limit disturbance within caribou habitat.



GRADE
LOW

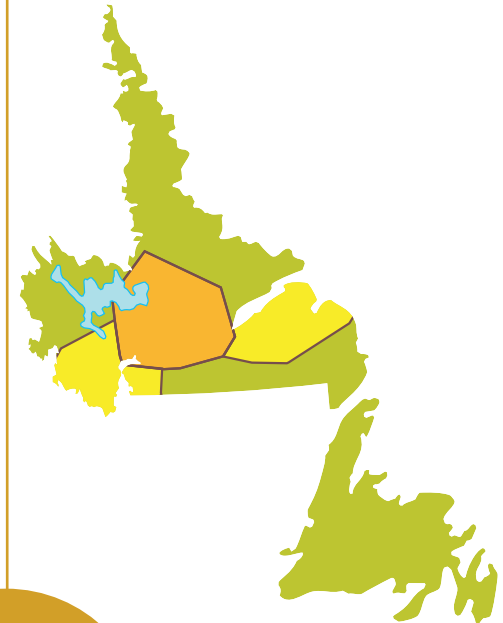


NEWFOUNDLAND AND LABRADOR

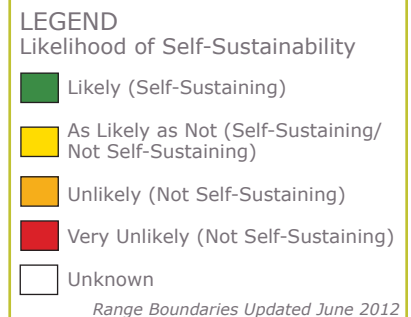
In Labrador, there are currently three herds of boreal woodland caribou listed as 'threatened' under the NL *Endangered Species Act*. Although there has been considerable research in the past few years to understand boreal caribou conservation, especially the scientific work for the Environment Canada boreal caribou Recovery Strategy, Newfoundland and Labrador's recovery plan for these herds is now almost 10 years old. This is worrisome for the fate of all of Labrador's boreal woodland caribou already listed as threatened under the NL *Endangered Species Act*. On the Island of Newfoundland, the herds of woodland caribou are considered a separate population under the federal *Species at Risk Act*, and are not yet formally listed as being "at risk", although an updated COSEWIC review is expected in 2014. The overall population there has declined from over 90,000 in the mid 1990's to about 30,000 presently, and the release of a 5-Year scientific research and management strategy is anticipated in the current fiscal year.

The Lac Joseph, Mealy Mountain, and especially the Red Wine Mountain herds of woodland caribou in central Labrador are small and in long-term decline, yet the provincial Department of Environment and Conservation has failed to identify and delineate their critical habitat. The landscape of Labrador is becoming increasingly industrialized and the province does not have adequate measures in place to monitor and limit cumulative disturbances. The Department of Environment and Conservation revealed that the Lower Churchill Hydroelectric Project that was released from the environmental assessment process could affect 30 percent of the winter habitat in the assessment area, and as much as 10 percent of calving habitat of the Red Wine herd may be lost. Intact habitat important to the Mealy Mountain Herd has, however, been potentially secured through the commitment to establish a national park and an adjoining Eagle River provincial waterway park.

Without clear delineation of critical habitat and better follow-through on environmental assessments, Newfoundland and Labrador will be unable to use science-based decision-making in developing a land-use plan. Without better protection of habitat and better mitigations of impacts from hunting pressure in central Labrador, the province's boreal caribou populations will continue to be imperiled with very little prospect for recovery. On the Island of Newfoundland, there is an over-emphasis on predator control as the solution to improving calf survival rates. There is little or no discussion of the interaction of habitat quality and burgeoning numbers of the introduced moose in affecting the documented effects by predators.



GRADE
LOW



Federal Role in Caribou Conservation

The release of the federal Recovery Strategy and guiding scientific information was an important step for boreal woodland caribou management in Canada. It is now incumbent upon the federal government to ensure that the provinces and territories have the necessary tools at their disposal to effectively develop and implement range plans for caribou recovery.

One key area where federal policy support and/or guidance is needed, but has not yet been provided is further guidance to assess the characteristics of undisturbed habitat and the biophysical habitat attributes required for caribou to carry out their normal life processes.

As noted earlier, Environment Canada defines critical habitat in the Strategy as: "(1) the area within the boundary of each boreal caribou range that provides an overall ecological condition that will allow for an ongoing recruitment and retirement cycle of habitat, which maintains a perpetual state of a minimum of 65% of the area as undisturbed habitat; and (2) biophysical attributes required by boreal caribou to carry out life processes,"⁸ however, our research revealed a wide variance across the country pertaining to how 'undisturbed' habitat and the biophysical attributes of habitat required by boreal caribou are interpreted.

The federal Recovery Strategy's guidance on this issue leaves room for interpretation and is hard to measure, since essentially, human caused-disturbances to habitat are defined as what's visible on Landsat imagery.

This makes sense for tracking more recent disturbances, but as clearcuts and other disturbances start to grow back or regenerate with vegetation they are considered to be "undisturbed" as soon as they are no longer visible again on the satellite images, irrespective of suitability for caribou reoccupation.

At present, there is no evidence to suggest that boreal woodland caribou have successfully reoccupied anthropogenically disturbed lands at the range and population scale, even after considerable time has passed for restoration to have occurred on the landscape. On the contrary, the northward movement of continuous range occupation of boreal woodland caribou in Canada suggests the opposite: that once lands are disturbed by industrial activities, caribou do not return to levels that are self-sustaining.

The current definition of undisturbed habitat is being left to the provinces and territories, which can develop definitions of disturbance that may not be scientifically robust. This would allow jurisdictions to say they are meeting the Environment Canada targets while practicing status quo operations.

⁸ Environment Canada (2012:32)

Progress insufficient to protect threatened caribou herds

Overall, provincial and territorial jurisdictions are making insufficient progress in protecting boreal woodland caribou and taking measures to address the requirements of the federal Boreal Woodland Caribou Recovery Strategy. Most jurisdictions received low grades for overall performance (Yukon, British Columbia, Alberta, Ontario, Québec, and Newfoundland and Labrador), with Northwest Territories, Manitoba and Saskatchewan showing signs of progress.

Implementation remains a challenge. In many cases, excellent caribou research is available (e.g., Alberta) and/or strong provincial recovery plans are in place (e.g., Québec and Ontario), yet concrete actions to protect the necessary caribou habitat remains a major obstacle. In other places there is a deficiency of information (e.g., Saskatchewan), uncertainty with respect to habitat protection options (e.g., NWT), or at worst, wanton disregard for public opinion, the will of resident First Nations' and scientific research that already exists (e.g., Yukon).

It has been one year since the federal Recovery Strategy was released, and the provinces and territories have two more years to develop effective caribou range plans. Yet, the pace of progress in the past 12 months raises serious doubt that these deadlines will be met. Where jurisdictions should be making great efforts to compile the best available information, bring together diverse

Conclusions



Photo: Garth Lenz

Conclusions

stakeholders and initiate the process of developing SARA-compliant conservation range plans, what we are generally seeing is inadequate. It is very much business as usual for industrial development approvals across the country and caribou continue to be exposed to risks.

It should be noted that both CPAWS and the David Suzuki Foundation are actively engaged in the Canadian Boreal Forest Agreement — which has been underway for over three years and is bringing conservation groups and forest companies together to develop proposals for caribou conservation on over 72 million hectares of forest tenures held by member companies of the Forest Products Association of Canada. During this process, we are actively working with local First Nations, municipal and provincial governments. However many of the issues flagged in this report have contributed to slow progress in achieving concrete outcomes under the Agreement.

Additional federal guidance needed

In order to fulfill its leadership role in caribou recovery across the country, more guidance is needed from the federal government on how undisturbed and critical habitat are going to be assessed.

The reclassification of disturbed habitat as undisturbed again should be clearly linked to caribou reoccupation as demonstrated by population condition data. This must be based on independent peer-reviewed evidence not anecdotal observations.

The federal government should also provide more specific guidance to define the qualities of the biophysical attributes required by boreal caribou to carry out life processes, for, by example, providing a mechanism that prioritizes intact habitat above habitat that has been logged and regenerated in critical habitat assessments.

Gaps in provincial and territorial legislation

There is a wide divergence of regulatory tools to protect species at risk across the provinces and territories. Protection efforts are being regionally thwarted because several provinces and territories (BC, Alberta, Saskatchewan and Yukon) do not have stand-alone species-at-risk legislation. Meanwhile in Ontario, the protections for species at risk have been weakened by a recent regulation that granted numerous exemptions for industry from the *Endangered Species Act*. Elsewhere, in Québec, the legal definition of caribou habitat is limited and in need of revisiting. Our assessment is that all jurisdictions require strong regulatory tools and policies to guide the development and implementation of conservation measures to achieve boreal caribou recovery.

Lack of cumulative effects assessment linked to approvals processes

In order for effective caribou range plans to be developed, provinces and territories must assess the cumulative impacts of present and future projects within caribou ranges. This is crucial for successfully applying disturbance thresholds as a management tool. Provinces and territories must be able to

screen and review activities in advance of approving them to ensure that disturbance thresholds are not being surpassed. This means that there must be inter-departmental communication and legislative tools that allow government to revise or reject proposed projects if the impact of these projects would be detrimental to caribou survival and recovery.

Looking across the country, to date there is no clear example of any of the provinces or territories successfully applying a cumulative effects lens to planning approval processes. Québec has produced a framework making this possible, but there is great uncertainty as to how it will be implemented, if at all. Ontario has proposed a Range Management Policy that continues a pattern of identifying but not adequately addressing issues, and it fails to set clear conditions under which further development and disturbance will not be permitted in caribou ranges.

Predator management concerns

In many instances where ranges are already highly disturbed, the primary cause for caribou mortality is wolf predation. But it is important to note that the increased predation is the outcome of habitat fragmentation, degradation and roads. After an area is logged, new growth attracts other ungulates such as moose and deer, which attract more wolves that indiscriminately prey upon caribou. Roads alter the predator prey dynamics by providing travel corridors for wolves that increase their hunting success. Predation mortality is the proximate cause of caribou decline. Habitat loss and degradation, however, are the root cause, and must be addressed for caribou recovery to occur.

Predator management is a sanitized way of describing the killing of wolves. In some instances, caribou populations will be extirpated if predation continues unabated. But the killing of wolves in the absence of meaningful habitat protection and restoration is not a viable solution, and may further disrupt the natural balance of functioning ecosystems. It should only be used as a last resort in keeping with the precautionary principle when no other means would succeed in retaining imperiled populations or preventing significant, long-lasting and/or irreversible damage to ecosystems. Predator 'management' must therefore be accompanied by adequate and effective habitat protection and restoration measures. Fortunately, at present, predator management is only being applied in isolated cases across the country.

Conclusions

Recommendations

- Provinces and territories must take immediate action to reverse downward caribou population trends by protecting remaining suitable habitat and moving aggressively to restore habitat to meet the targets identified by Environment Canada.
- Provinces and territories must implement or in several cases develop the legislative tools to reverse downward population trends. This requires political leadership that is currently lacking across the country.
- In order for provinces and territories to successfully apply Environment Canada's disturbance management threshold to manage caribou ranges and enable caribou recovery, they must consider future cumulative disturbance impacts within each range. This must be linked to an approvals process where population condition and range condition inform decision making.
- Predator management should only be used as a last resort and must be based on scientific evidence and be accompanied by adequate habitat protection and restoration measures.
- The federal government needs to provide further guidance to the provinces and territories on how it will assess "undisturbed habitat" and the biophysical habitat attributes required for caribou to carry out their life processes.



Photo: Ron Thiessen

Appendix I

Guidance from federal
Recovery Strategy to
Provinces and Territories
regarding Range Plan
development.



Range Plan requirements from federal *Species at Risk Act*

Given the dynamic nature of boreal caribou habitat requirements, the landscape scale at which those requirements operate, and the highly variable present-day land management and ecological conditions that exist among all boreal caribou ranges, range-specific approaches to protecting critical habitat, and in many cases improving the condition of critical habitat for this species, are needed.

In light of jurisdictional responsibilities for land and natural resource management, it is expected that they will develop range plans. In areas where the responsibility for land and natural resource management varies, range plans will be developed collaboratively between all responsible authorities. Range plans may be stand-alone documents, or part of other planning documents including action plans.

Range plans will outline how the given range will be managed to maintain or attain a minimum of 65% undisturbed habitat over time. Specifically each range plan should reflect disturbance patterns on the landscape, as measured and updated by the provinces and territories, and outline measures and steps that will be taken to manage the interaction between human disturbance and natural disturbance.

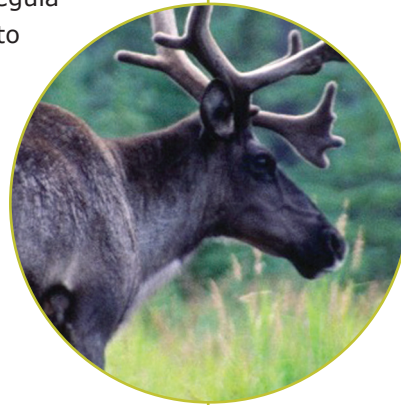
Purpose of a range plan

The main purpose of a range plan is to outline how range-specific land and/or resource activities will be managed over space and time to ensure that critical habitat is protected from destruction. As such, each range plan should reflect disturbance patterns on the landscape, as measured and updated by the provinces and territories, and outline the measures and steps that will be taken to manage the interaction between human disturbance, natural disturbance, and the need to maintain or establish an ongoing, dynamic state of a minimum of 65% of the range as undisturbed habitat at any point in time to achieve or maintain a self-sustaining local population. While the general ecological principles and critical habitat dynamics described in the Recovery Strategy apply to

Photo: Ron Thiessen

Appendix I

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all ranges, individual ranges also possess a unique mix of ecological and land use conditions (e.g. population condition, habitat condition and configuration, social and legal arrangements) that must be factored into decision making.

The range plans, consistent with this Recovery Strategy, will be one factor considered by the Minister of the Environment in forming an opinion on whether the laws of the province or territory effectively protect critical habitat within each boreal caribou range. As such, range plans should contain the background information necessary for the Minister of the Environment to make an informed assessment of whether critical habitat protection is in place or is being realistically pursued throughout the range. Specifically, range plans should indicate what laws of the province or territory, legislative and/or regulatory provisions, licences or other instruments issued under an Act or regulation, or contractually binding agreements the jurisdiction intends to use to protect critical habitat. In the absence of range plans, the minister will use the best available information and consult with the jurisdiction to determine whether critical habitat is effectively protected. If the minister is of the opinion that there are no provisions in or measures under SARA or another Act of Parliament that protect the critical habitat (including a section 11 agreement) and the laws of the provinces and territories do not effectively protect their critical habitat, the Minister of the Environment is required to recommend that a protection order be made to the to the Governor in Council.

Range plans may form part of an action plan under SARA. However, in order to be adopted in whole or in part as an action plan by the Minister of the Environment, the range plan and the process used to develop it will need to meet the requirements of section 48 (cooperation) and section 49 (content) of SARA. In addition, range plans will be used to inform reporting that is required under SARA on implementation and progress toward meeting the population and distribution objectives of this Recovery Strategy. Finally, range plans may be used to inform decisions related to environmental assessments, issuance of permits (either under SARA or other applicable legislation), and other similar approval processes.

What should be included in a range plan?

There is no single prescriptive approach to developing a range plan, and jurisdictions may select those approaches they consider most appropriate. Range plans should include such things as:

- Demonstration of how at least 65% undisturbed habitat in the range will be achieved and/or maintained over time;
- List of the laws of the province or territory (including any corresponding regulations, permits, licenses, etc.) and conservation measures (such as agreements, programs, compliance incentives, conservation leases, etc.) that will be used to prevent activities likely to destroy critical habitat;
- Include land tenure assessment for all areas of critical habitat within each range
- Where protection measures do not exist, the range plan should indicate the

Photo: Wayne Sawchuk

Appendix I

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steps being taken to put them in place and the expected timeline for implementation

- Information on range-specific activities likely to destroy critical habitat within each range. This will involve identifying and assessing current projects/activities as well as any foreseeable future projects/activities, and should include a cumulative effects analysis;
- An approach for measuring disturbance to the landscape and monitoring critical habitat to ensure that protection mechanisms are in place and are working to prevent the destruction of boreal caribou critical habitat;
- An approach for monitoring population trends to ensure that local populations are responding positively to management techniques;
- An approach for monitoring natural disturbances, and habitat quality and quantity; and
- Identification of information needs and plans for addressing information gaps.

Timelines for the development of a range plan

Given the variation in management contexts, population and habitat information, and levels of risk across the geographic distribution of boreal caribou, range plans should be completed by the responsible jurisdiction(s) within 3-5 years of the posting of this Recovery Strategy.

(Federal Species at Risk Act Pages 38-40)

Photo: Ron Thiessen



Appendix II



The questionnaire that was sent to provinces and territories:

- 1.) Has the province/territory been sufficiently meeting its responsibilities to help develop an action plan as outlined in the Recovery Strategy and Section 48 of SARA?
- 2.) Are appropriate spatial and temporal scales being considered?
- 3.) Where provincial boreal woodland caribou populations have been deemed at risk of imminent extirpation (i.e., where the population's probability of persistence is 50% or below), has the province taken immediate steps to protect remaining intact habitat?
- 4.) Assessing the status of those activities likely to destroy critical habitat in the province/territory (as defined in Section 7.3 of the Recovery Strategy), do the existing provincial/territorial laws provide caribou habitat protection from these activities? Are the habitat protection measures congruent with those under SARA?
- 5.) If the province/territory does not have the necessary laws and/or tools to effectively protect critical habitat, is the province/territory taking necessary steps to address these gaps? Are there Acts of Parliament that could effectively fill these gaps (e.g. National Wildlife Areas)?
- 6.) Has the province/territory initiated a range plan for each range as outlined within the Recovery Strategy within 3-5 years of the posting of the Recovery Strategy?

Photo: US FWS (Fish and Wildlife Service)

Appendix II

- 7.) Is the province/territory developing documents that are consistent with the following criteria:
- For ranges with 65% or more undisturbed habitat, the maintenance of a minimum of 65% undisturbed habitat within as well as between boreal caribou ranges, including maintenance of connectivity where required?
 - For ranges with less than 65% undisturbed habitat, the restoration of disturbed habitat to a minimum of 65% undisturbed habitat (e.g. restoring the industrial landscape features including [but not limited to] roads, old seismic lines, pipelines, cut-lines, temporary roads, cleared areas; and reconnection of fragmented ranges)?
- 8.) Has the province defined the biophysical attributes of caribou critical habitat?
- 9.) What steps is the province taking to protect critical habitat based on its biophysical attributes?
- 10.) Does the province or territory have a cumulative effects framework in place through which to base an assessment of the cumulative effects of current project activities as well as foreseeable projects/activities likely to destroy critical habitat?
- 11.) Is the province/territory sufficiently measuring/monitoring the following based on the best available science/information:
1. Population size(s) and/or trend(s) (the use of collaring would be an example)
 2. Range delineation(s)
 3. Disturbance levels
- 12.) Does the province/territory sufficiently identify information needs and plans for addressing information gaps?
- 13.) Is predator/alternate prey management being used only as a last resort, in combination with habitat restoration efforts, and only in the short-term as other tools are being used to recover/stabilize boreal caribou populations?
- 14.) Is the province/territory providing opportunities for participation/engagement with relevant stakeholders and, where applicable, facilitating cross-jurisdictional cooperation and implementation? Relevant stakeholders may include: municipal and federal governments, wildlife management boards, Aboriginal communities and organizations, non-governmental organizations, and other organizations responsible for land and/or resource management and/or conservation within the boreal forest.
- 15.) Is the province/territory encouraging stewardship of boreal caribou habitat among industries, interest groups, and Aboriginal communities and organizations?

Questions sent to the federal government:

Is the federal government providing the appropriate guidance to the provinces in terms of policy and science to successfully complete SARA-compliant range plans?

CATEGORY 1: TAKING ACTION TO PROTECT CARIBOU HABITAT ON FEDERAL LANDS?

Has the federal Minister of the Environment taken action to protect critical caribou habitat on federal lands?

- a) Has the federal government included in the Canada Gazette a description of the critical habitat in all national parks within 90 days of the Recovery Strategy being included in the public registry (as per SARA Section 58(2))?
- b) Has the federal government made a ministerial order or a statement (looking at other Acts of Parliament) to protect all critical habitat on federal lands outside of national parks within 180 days of the Recovery Strategy being included in the public registry (as per SARA Section 58(5) a)?
- c) If the Minister has not made the above order, has he/she included in the public registry a statement setting out how the critical habitat or portions of it, as the case may be, are legally protected on federal lands outside of national parks (as per SARA section 58(5) b)?

Appendix III

Photo: Ted Simonett



Appendix III

CATEGORY 2: ENSURING THAT CARIBOU HABITAT IS EFFECTIVELY PROTECTED ON PROVINCIAL AND TERRITORIAL LANDS

The federal Minister has the responsibility to assess and declare whether critical habitat in provincial/territorial lands is effectively protected and to step in to protect it if it is not.

- a) Has the Minister of the Environment requested and reviewed provincial and territorial documents pertinent to the protection of critical habitat?
- b) Has the Minister of the Environment declared whether, in his/her opinion, critical habitat situated in federal and provincial/territorial lands is effectively protected?
- c) Has the Minister invoked the safety net to protect species within provincial/territorial jurisdiction where he/she was of the opinion that critical habitat was not effectively protected (as per SARA section 61(4) b)?
- d) Has the federal government initiated progress towards the completion of boreal woodland caribou action plan(s) by December 31, 2015 as required by the Recovery Strategy (as per SARA Section 47)?

CATEGORY 3: PROVIDING SUFFICIENT GUIDANCE TO THE PROVINCES TO RECOVER POPULATIONS

- a) Has Environment Canada clearly defined those activities likely to destroy boreal woodland caribou critical habitat?
- b) Has Environment Canada provided further guidance to provinces on the biophysical attributes of boreal woodland caribou critical habitat?
- c) Has Environment Canada provided policy guidance to the provinces as per SARA Section 56 (i.e., the codes of practice, national standards or guidelines with respect to the protection of critical habitat)?
- d) Has Environment Canada provided qualifying criteria and content for SARA Section 11 (Agreements under the SARA)?
- e) Has Environment Canada clearly defined effective protection in publicly available policy documents?



Photo: Ron Thiessen



The Canadian Parks and Wilderness Society, CPAWS, is Canada's voice for wilderness. Since 1963 we've led in creating over two-thirds of Canada's protected areas. That amounts to about half a million square kilometres – an area bigger than the entire Yukon Territory! Our vision is that Canada will protect at least half of our public land and water. As a national charity with 13 chapters, over 50,000 supporters, and hundreds of volunteers, CPAWS works collaboratively with governments, local communities, industry and indigenous peoples to protect our country's amazing natural places. We're also on guard to ensure that our parks are managed to protect the nature within them.

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The David Suzuki Foundation, through a combination of sound science and active public engagement, motivates Canadians to take action on the environmental challenges we collectively face. Since 1990, DSF has worked with communities, government, business and conservation allies to help people find solutions for living within the limits of nature. Consistently named Canada's most trusted environmental organization in polls, DSF communicates with a growing community of over 150,000 individuals focusing on ways we can protect vital marine and terrestrial ecosystems and find climate solutions.

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