



Glossary of Caribou Terms

Adaptive Management

Adaptive management is a systematic process for continually improving management policies and practices by learning from the outcomes of operational programs.

Adventure Tourism

Adventure Tourism (AT) refers to commercial recreation/tourism operators and educational institutions who provide outdoor recreation/tourism activities on provincial public land including training, transportation, guiding, accommodations, or other commercial recreation/tourism improvements, food services, or entertainment.

Apparent Competition

An indirect interaction between two or more prey species through a shared predator.

Canada-British Columbia Conservation Agreement for Southern Mountain Caribou in British Columbia (Section 11 Agreement)

On February 21, 2020, the Governments of B.C. and Canada signed the [Canada British Columbia Conservation Agreement for Southern Mountain Caribou in British Columbia \(PDF, 3.6MB\)](#). The bilateral agreement contains overarching commitments, measures, and strategies for the recovery of southern mountain caribou throughout the range of the species in B.C.

[Section 11](#) of the federal *Species at Risk Act (SARA)* allows Canada to enter into conservation agreements to benefit species at risk.

Caribou Herd (Subpopulation)

A geographically connected population of caribou whose dynamics are primarily driven by local conditions and factors rather than immigration or emigration.

Caribou Herd (Subpopulation) Boundary

The area that encompasses the extent of both core and the surrounding matrix habitat for a subpopulation (herd). Subpopulation boundaries do not overlap even though some caribou subpopulations share portions of their annual range.

Caribou Recovery Program

The Provincial Caribou Recovery Program's fundamental purpose is to develop, implement, and monitor new recovery actions and provincial strategies with the aim of meeting or exceeding provincial population and habitat objectives for caribou in B.C.



Caribou Types

Caribou in Canada are a true northern species, specialized to thrive in cold and harsh landscapes. All caribou are dependent upon large undisturbed areas for food resources, reproductive success, and protection from predators and the weather. Indigenous peoples know caribou by many different names that reflect the diversity of types of caribou, as well as the diversity of Indigenous languages. The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has assigned caribou into 12 Designatable Units (DU) based on genetics, appearance, behaviour, and distribution. The federal [Species at Risk Act](#) (SARA) recognizes three sub-species, with multiple populations formally listed as “species” for the purpose of the Act:

- *Rangifer tarandus pearyi* - found only on arctic islands
- *Rangifer tarandus groenlandicus* - found on the tundra
- *Rangifer tarandus caribou* - found in forests

All caribou in British Columbia are *Rangifer tarandus caribou*, mapped as 54 extant or recently extirpated herds or subpopulations.

Caribou Classifications:

Ecotype	SARA-listed Species	Group (SARA)	Designatable Unit (DU) (COSEWIC)
Mountain Ecotype	Southern Mountain Population	Southern Group	Southern Mountain DU 9
Northern Ecotype		Central Group	Central Mountain DU 8
		Northern Group	Northern Mountain DU 7
	Northern Mountain Population		
Boreal Ecotype	Boreal Population	Boreal Population	Boreal DU 6

Boreal Caribou

The Boreal caribou ecotype occurs throughout the boreal forest from Alaska to Newfoundland. The Boreal ecotype is the least common of the three ecotypes of caribou found in British Columbia and occupy five herd range areas in the northeast portion of the province. Their range is continuous



with Alberta and the Northwest Territories. Boreal caribou are dependent upon large undisturbed areas for food resources, reproductive success and protection from predators and the weather. They primarily use large peatlands and open old forest throughout the year. These caribou are listed as Threatened under the federal [Species at Risk Act](#), are provincially Red-Listed (threatened to endangered), and are identified as Priority 1 under the B.C. Conservation Framework.

Northern Mountain Caribou

The Northern Mountain caribou ecotype occurs throughout the mountainous regions of north-central and northwestern BC. This is the most common of the three ecotypes of caribou found in British Columbia and occupy 17 herd range areas in the northwest portions of the province. Their range is continuous with Yukon and the Northwest Territories. Northern Mountain caribou are dependent upon large undisturbed areas for food resources, reproductive success and protection from predators and the weather. They primarily spend the summer on alpine and upper subalpine range. In winter some herds move down to coniferous forests and lower subalpine, although other herds winter in the alpine. These caribou are listed as Special Concern under the federal [Species at Risk Act](#), are provincially Blue-Listed (at risk, but not extirpated, endangered or threatened), and are identified as Priority 2 under the B.C. Conservation Framework.

Southern Mountain Caribou

The Southern Mountain caribou (SMC) ecotype represents the world's southernmost caribou population, found from central to southern British Columbia. Historic ranges extended as far south as northern Idaho and Washington states. This ecotype is divided into three groups based on their COSEWIC-defined "Designatable Unit" or DU:

1. **Northern Group** (DU 7) with 9 herd range areas
2. **Central Group** (DU 8) with 5 herd range areas
3. **Southern Group** (DU 9) with 18 herd area range areas

Southern Group herds live in the interior wet belt and in winter, these caribou walk on top of the deep snowpack and feed on arboreal lichens that grow on trees. Most of these caribou remain at mid to high elevations year-round but some herds use low elevations seasonally. In contrast, most Central Group and Northern Group herds move between winter and summer ranges, spending portions of the winter in low-elevation pine forests feeding on terrestrial lichens, and portions in high-elevation ranges in the subalpine feeding on arboreal lichens or on terrestrial lichens on wind-swept alpine slopes.

Southern Mountain caribou in British Columbia are dependent upon large undisturbed areas of primarily mountainous terrain for food resources, reproductive success and protection from predators and the weather. These caribou are listed as Threatened under the federal [Species at Risk Act](#), are provincially Red-Listed (threatened to endangered), and are identified as Priority 2 under the B.C. Conservation Framework.

For map locations and ease of viewing these groups, please see the [Caribou in British Columbia webmap](#).



Conservation Breeding

Conservation breeding involves the captive propagation of at-risk species to help maintain genetic diversity, produce viable individuals for release, and ultimately mitigate species' extinction or local extirpation.

Conservation and Recovery Measures

Actions to maintain and increase at-risk caribou populations in the Province of B.C., including actions to protect caribou and their habitat.

COSEWIC

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is an independent advisory panel to the federal Minister of Environment and Climate Change that meets twice a year to assess the status of wildlife species at risk of extinction.

Critical Habitat

As defined in section 2(1) of SARA: Habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species' critical habitat in the recovery strategy or in an action plan for the species.

Designatable Units (DU)

Species, subspecies, variety, or geographically or genetically distinct population that may be assessed by COSEWIC, where such units are both discrete and evolutionarily significant (see [COSEWIC Guidelines for Recognizing Designatable Units](#)).

B.C.'s caribou have been assigned to four DUs – boreal (DU 6), northern mountain (DU 7), central mountain (DU 8), and southern mountain (DU 9).

Ecotype

An ecological grouping of subpopulations ("herds" for caribou), within a species or subspecies that has adapted to different landscapes or environments as expressed primarily by its movements and feeding behaviour. Caribou that live in areas of relatively shallow snowpack and which feed primarily on terrestrial lichens (but also on arboreal lichens), are called "northern" ecotype, while caribou that live in deep snow areas and feed primarily on arboreal lichens are called "mountain" ecotype. Caribou that live primarily in large peatlands and open old boreal forest throughout the year are called "boreal" ecotype. See **Caribou Types**

Ex Situ Conservation

The process of protecting a species at risk outside of its natural habitat using techniques such as zoos, conservation breeding centres, aquariums, botanical gardens, and gene banks.

Extirpated

A subpopulation or Local Population Unit (LPU) of caribou that currently contains no individuals.



Feeding Stations

Structures used to provide supplemental pelleted food to wild caribou to improve survivability by maintaining or improving nutrition and body condition.

See also **Supplemental Feeding**

Functionally Extirpated

A subpopulation or LPU of caribou is considered functionally extirpated when it contains so few individuals, namely <20 individuals or (<8 breeding females), that it is nonviable and cannot be recovered without the addition of animals from an external source.

General Wildlife Measure (GWM)

Specific management practices for Identified Wildlife that may limit forest or range management practices partially or entirely, specifically:

General wildlife measures

9 (1) The minister responsible for the [Wildlife Act](#) by order may establish a general wildlife measure, to be applied to a specified area, for a category of species at risk, regionally important wildlife or specified ungulate species, if satisfied that

- (a) the measure is necessary to protect or conserve the species in the category in the area to which the measure relates, and
- (b) this regulation or another enactment does not otherwise provide for that protection or conservation.

(2) The minister responsible for the [Wildlife Act](#) by order may establish a general wildlife measure for a wildlife habitat area or an ungulate winter range if satisfied that

- (a) the measure is necessary to protect or conserve the wildlife habitat area or ungulate winter range, and
- (b) this regulation or another enactment does not otherwise provide for that protection or conservation.

Habitat

Generally, habitat is the landscape used by caribou to carry out their life history elements, such as foraging, calving, migrating, and breeding (core habitat), as well as the surrounding area that influences caribou (matrix habitat), throughout the year. Sufficient amounts of both Core and Matrix habitats are required to allow for self-sustaining populations.

Core Habitat

The area that encompasses the annual range for a subpopulation, which has (or has future potential to have) the necessary biophysical attributes to allow for self-sustaining populations. Core habitat is mapped at a broad scale and may encompass areas of non-habitat such as high elevation rock and ice. In DUs 7 and 8 core habitat may be further divided into all or some of the following categories:



1. High Elevation Summer Range (HESR)

Includes alpine and subalpine areas used by caribou for calving and summer range, with many areas also serving as HEWR. High value areas in the HESR include alpine, subalpine parkland and mature high-elevation subalpine forests.

2. High Elevation Winter Range (HEWR)

Includes windswept alpine ridges and adjacent subalpine forest. High value areas in the HEWR include alpine, subalpine parkland and mature high-elevation subalpine forests.

3. Low Elevation Winter Range (LEWR)

Includes low elevation forest types (e.g., pine, pine-leading, black-spruce-leading, tamarack leading stands) used by select caribou herds in the winter.

4. Low Elevation Summer Range (LESR)

Areas used during spring, calving, summer, and fall/rut in low-elevation mature forests (e.g., pine, pine-leading, black-spruce-leading, tamarack leading stands) by select caribou herds.

Matrix Habitat

The area adjacent to core habitat that has periodic, low, or no known use by caribou but may be important for connectivity between suitable caribou core habitats, and most importantly, supports primary prey and associated predators that directly affect the caribou subpopulation. Matrix habitat includes areas up to ~30 km from core habitat and is based on winter range of primary prey, local knowledge of predator distribution and barriers to predator movement. Matrix habitat boundaries may also be defined by landscape features (e.g., large water bodies, glaciers, human settlement).

Habitat Protection

Habitat protection involves legislation or conservation designations that limit human activities on a land base for the purpose of species or ecosystem conservation.

Habitat Restoration

Habitat restoration is the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. [Source: [Society for Ecological Restoration](#)]

There are two types of habitat restoration: Ecological and Functional. **Ecological restoration** is the regeneration (or regrowth) of a disturbed ecosystem to its pre-disturbed state. It involves tree replanting and ensuring the availability of caribou forage. **Functional restoration** reduces the use of linear features such as roads and trails. The intent is to reduce the efficiency of predator movement and maintain spatial separation between caribou and its predators.

Herd Plans

Caribou herd plans are living documents that provide specific information on historical, current, and proposed future efforts for recovery.



Identified Wildlife

Identified wildlife are species at risk and regionally important wildlife that the Minister of Environment designates as requiring special management attention under the [Forest and Range Practices Act](#).

In Situ Conservation

The process of protecting a species at risk in its natural habitat. In situ techniques include, but are not limited to, habitat protection and restoration, predator management, prey management, wild-to-wild translocations, and maternal penning.

Lambda (λ)

The finite population growth rate that gives the proportional change in population size from one time period to the next. When λ is greater than 1, the population is growing; when λ is less than 1, the population is declining. The change in λ is the primary metric used to assess the success of management actions (i.e., pre- and post-action changes in λ).

Linear Feature

Linear features include roads, seismic lines, power lines, pipelines, railroads, cut lines, and recreational trails. How many linear features (measured in kilometers) exist in an area of land is known as “linear features density”.

Local Population Units (LPU)

A cluster of caribou subpopulations that reflects a likely larger historical subpopulation that has since declined and that has been fragmented into the currently recognized subpopulations; for subpopulations that are not clustered with other subpopulations into a larger local population unit, the local population unit is equivalent to the subpopulation.

Maternal Penning

Maternal penning involves capturing pregnant adult female caribou in late winter and transporting them to a pen where they are protected from predators until after the neo-natal period (3-4 months). The caribou are fed a combination of natural foods and pelleted rations which may have the additional benefit of improving nutrition and growth of the young calves. The cows and calves are released back to the wild in July.

Motorized Recreation

Any form of recreation that is aided by an external power source, such as a snowmobile, helicopter, snowcat, all-terrain vehicle, powerboat, etc. Vessels that use motorized propulsion only intermittently for control or safety purposes, vessels that provide a transport service to and from a non-motorized water-based AT operation, and pedal bikes are considered non-motorized.



Motorized (Mechanized) Ski Guiding refers to guided ski activities in winter snow conditions where mechanized transportation is an integral part of the skiing experience, such as transportation via a helicopter for heli-skiing, snowcat for cat-skiing or any other use of mechanized access to facilitate guided skiing (e.g., snowmobiles).

See also: **Adventure Tourism**

Motor Vehicle Prohibition

A regulatory measure that restricts use of motorized vehicles in specified areas (*Wildlife Act – Motor Vehicle Prohibition Regulation*). Can be used for an area currently in use or proactively by restricting future access. Can apply broadly or to specific types of motorized vehicles such as snowmobiles; commercial purposes may be exempted from the prohibition.

See also **Winter Motorized Recreation Management**

Non-viable Herd

A herd for which recovery is not feasible.

Population

A group of caribou occupying a defined area distinguished spatially from areas occupied by other groups of caribou. Population dynamics are driven primarily by local factors affecting birth and mortality rates, rather than immigration or emigration among groups.

Under [section 2\(1\) of the federal *Species at Risk Act \(SARA\)*](#), geographically or genetically distinct populations can be defined as a “wildlife species”, and as such, different populations can be listed as different species.

Partnership Agreement for the Conservation of the Central Group of Southern Mountain Caribou

On February 21, 2020, the Governments of Canada, B.C., Saulteau First Nations, and West Moberly First Nations signed the [Intergovernmental Partnership Agreement for the Conservation of the Central Group of the Southern Mountain Caribou](#). The Partnership Agreement contains commitments to habitat protection and management, and other recovery measures including habitat restoration, maternity penning, and predator management. These actions are in support of the Shared Recovery Objective of “immediately stabilizing and expeditiously growing the population of the Central Group to levels that are self-sustaining and support traditional aboriginal harvesting activities, consistent with existing Aboriginal and Treaty rights”.

Population Maintenance (Species at Risk)

Population maintenance is the management process by which caribou population numbers are kept stable over time.

See **Recovery (Species at Risk)**



Predator (on Caribou)

Any species that hunts and kills caribou, including, but not limited to, wolverine, wolves, bears, and cougars.

Predator Management

Predators are typically managed in one of three ways or in combinations of these methods:

1) through regulated hunting and trapping (e.g., increased season lengths, bag limits, removing female quota, etc.), 2) through the management of their primary prey populations, and 3) through direct removal (predator reduction).

Predator Reduction

Predator reduction is the targeted removal of localized predator populations for the purpose of caribou recovery. Predator reduction is considered for specific caribou herds based on predator density when predation has been identified as a barrier to effective caribou recovery for the herd.

Prey - Primary

A prey species that comprises the main diet of a predator, or that numerically sustains a predator species. In B.C., ungulate species (e.g., moose, elk, etc.) are the primary prey of predators like wolf and cougar.

Prey – Secondary or Alternate

Prey species that are not the main diet of a predator, but are opportunistically hunted.

Primary Prey Management

Primary prey management is the controlled reduction of the main prey species of caribou predators. Primary prey are typically managed in a combination of methods, including regulated hunting and trapping (e.g., increased season lengths, bag limits, etc.), and management of primary prey habitat to move primary prey (and by association, their predators) away from caribou habitat.

Provincial Caribou Recovery Science Team

An internal B.C. government forum that brings together regional and provincial representatives with caribou expertise to share knowledge and improve understanding on key scientific issues to support the recovery and maintenance of caribou and their habitat in B.C.

Public Access Prohibition

A regulatory measure that restricts public access in specified areas (*Wildlife Act – Public Access Prohibition Regulation*). Can be used for an area currently in use or proactively by restricting future access. Can apply broadly or to specific activities such as access by motorized vehicle for recreational purposes.



Quasi-extinction Threshold

The quasi-extinction threshold represents the minimum population size above which recovery efforts to prevent extirpation are feasible and beyond which the herd is functionally extirpated. The quasi-extinction threshold is established to be eight breeding females (or 20 animals) for caribou subpopulations in BC.

Recovery (Species at Risk)

Species at risk recovery is the process by which the decline of an endangered, threatened, or extirpated species is arrested or reversed, and threats are removed or reduced to improve the likelihood of a species' persistence in the wild.

Recovery Strategy is a plan that outlines the long-term goals and short-term objectives for recovering a species at risk, based on the best available scientific baseline information.

Federal Recovery Strategy The federal Minister of the Environment, whose portfolio includes Environment and Climate Change Canada and the Parks Canada Agency, is responsible for the preparation of recovery strategies for SARA-listed Extirpated, Endangered, and Threatened terrestrial species. The recovery goal included in the federal recovery strategies for boreal and southern mountain caribou is to achieve self-sustaining populations in all local population units within their current distribution, to the extent possible.

Recovery Actions or Activities or Measures refer to the steps and processes taken to achieve the intentions of the recovery of at-risk wildlife, habitats, ecosystems, etc.

Section 11 Agreement

[Section 11](#) of the federal *Species at Risk Act* (SARA) allows Canada to enter into conservation agreements to benefit species at risk.

See **Canada - British Columbia Conservation Agreement for Southern Mountain Caribou in British Columbia (Section 11 Agreement)**

See **Partnership Agreement for the Conservation of the Central Group of the Southern Mountain Caribou**

Self-Sustaining

Local Population Units (LPU) are considered “self-sustaining” when:

- a. The LPU on average demonstrates stable or positive population growth over the short-term (≤ 20 yrs), and is large enough to withstand random events and persist over the long-term (≥ 50 yrs), without the need for ongoing active management intervention; and,
- b. There is an increase to at least 100 caribou within LPUs that currently consist of fewer than 100 caribou, and there is no reduction in the number of caribou within LPUs that currently consist of over 100 caribou.
 - a. For Boreal Caribou, self-sustaining is defined as: an LPU 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.



Snowmobile Management

See **Winter Motorized Recreation Management**
See **Motorized Recreation** for its own definition.

Stewardship Management Agreement (SMA)

An agreement between a recreation stakeholder group and the government of British Columbia that grants use of a specific area with temporal and / or spatial limitations. Closures within a Stewardship Management Agreement may be regulated under the *Wildlife Act*:

[Wildlife Act MOTOR VEHICLE PROHIBITION REGULATION B.C. Reg. 196/99](#)

Supplemental Feeding

Maintaining wildlife populations by enhancing or replacing natural feed with food produced or provided by humans in a controlled manner. Does not include use of bait for the purposes of hunting ungulates.

Tourism and Recreation Management

Recreation management involves reducing disturbance from recreational activities by controlling or limiting access to sensitive caribou habitat in the backcountry. Backcountry recreation has the potential to adversely affect caribou populations through (1) direct disturbance and increased stress and metabolic requirements; (2) displacement of caribou from their preferred habitats; (3) increased avalanche fatality risk due to extra travel caused by displacement to and (4) increased predation (by providing wolves with greater access to caribou). Recreation management options include access restrictions, education and outreach, and recreation monitoring.

Translocation

This is the purposeful moving of caribou individual(s) from one subpopulation to another to augment and support the recipient herd's recovery.

Ungulate Winter Range (UWR)

Areas designated under the *Forest and Range Practices Act (FRPA)* and *Oil and Gas Activities Act (OGAA)* that contain habitat that is necessary to meet the winter habitat requirements of ungulate species, such as caribou, moose, elk, deer, mountain goat, or sheep.

For more information, see: [Legislation for Species at Risk](#) – links to FRPA and OGAA

Ungulate winter ranges and objectives

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(1) The minister responsible for the [Wildlife Act](#) by order may establish an area as an ungulate winter range if satisfied that

- (a) the area contains habitat that is necessary to meet the winter habitat requirements for a category of specified ungulate species, and
- (b) the habitat referred to in paragraph (a) requires special management that is not otherwise provided for under this regulation or another enactment.



(2) The minister responsible for the [Wildlife Act](#) by order may establish an ungulate winter range objective for an ungulate winter range if satisfied that the ungulate winter range requires special management that is not otherwise provided for under this regulation or another enactment.

Viabile Herd

A herd for which recovery is still feasible with or without additional measures. A viable herd can be stable or unstable, depending on its long-term population trend. The federal Boreal caribou science assessment suggests that the minimum viable number for a local population unit is 300 caribou. No estimate of minimum viable population size exists for Southern Mountain caribou.

Wildlife Habitat Area (WHA)

Areas designated under the *Forest and Range Practices Act* and *Oil and Gas Activities Act* that are necessary to conserve important habitat (e.g., calving, nesting, migratory habitats) for Identified Wildlife.

Wildlife habitat areas and objectives

(1) The minister responsible for the [Wildlife Act](#) by order may establish an area as a wildlife habitat area if satisfied that the area is necessary to meet the habitat requirements of a category of species at risk or regionally important wildlife.

(2) The minister responsible for the [Wildlife Act](#) by order may establish a wildlife habitat area objective for a wildlife habitat area if satisfied that the wildlife habitat area requires special management that has not otherwise been provided for under this regulation or another enactment.

(3) Despite subsections (1) and (2), if the minister responsible for the [Wildlife Act](#) reasonably believes that a wildlife habitat area is sensitive to damage or disturbance, he or she

(a) must not disclose the location of the wildlife habitat area in the order,

(b) must provide written notice of the location of the wildlife habitat area to the holders of agreements under the [Forest Act](#) or the [Range Act](#) that will be affected by the order, and

(c) may attach conditions to the order

(i) prohibiting those holders from disclosing the location of the wildlife habitat area, or

(ii) restricting the extent to which, or the persons to whom, those holders may disclose the location of the wildlife habitat area.

(4) A person to whom a condition referred to in subsection (3) (c) applies must comply with the condition.

Wildlife Management and Stewardship

Wildlife management is the management process influencing interactions among and between wildlife, habitats, and people to achieve predefined impacts. It attempts to balance the needs of wildlife with the needs of people using the best available science. Wildlife management draws on disciplines such as mathematics, chemistry, biology, ecology, climatology, and geography to gain results. The incorporation of Indigenous knowledge and other knowledge systems can broaden this approach in support of the idea of safeguarding wildlife for future generations.



Updated: April 2022

Management Actions or Activities or Measures refer to the steps and processes taken by society to achieve the intentions of the management of wildlife, habitats, ecosystems, etc.

See also **Recovery (Wildlife), Population Maintenance**

Winter Motorized Recreation Management

Motorized vehicles intended or used for travel on snow for recreational purposes, including (but are not limited to) snowmobiles, snowcats, and all-terrain vehicles (ATVs). Throughout B.C., winter motorized recreation is managed through a combination of regulatory and voluntary measures to avoid disturbance of caribou.

See also **Tourism and Recreation Management**