



SOUTHERN MOUNTAIN CARIBOU RECOVERY STRATEGY AMENDMENT

A Closer Look at the Draft Critical Habitat: Categories and Concepts

In-person workshops were held at the following locations and dates:

Kelowna, BC : January 31 - February 1, 2024

Edmonton, AB : February 14 - 15, 2024

Prince George, BC : March 5 - 6, 2024



Canadian Wildlife Service
Environment and Climate Change Canada

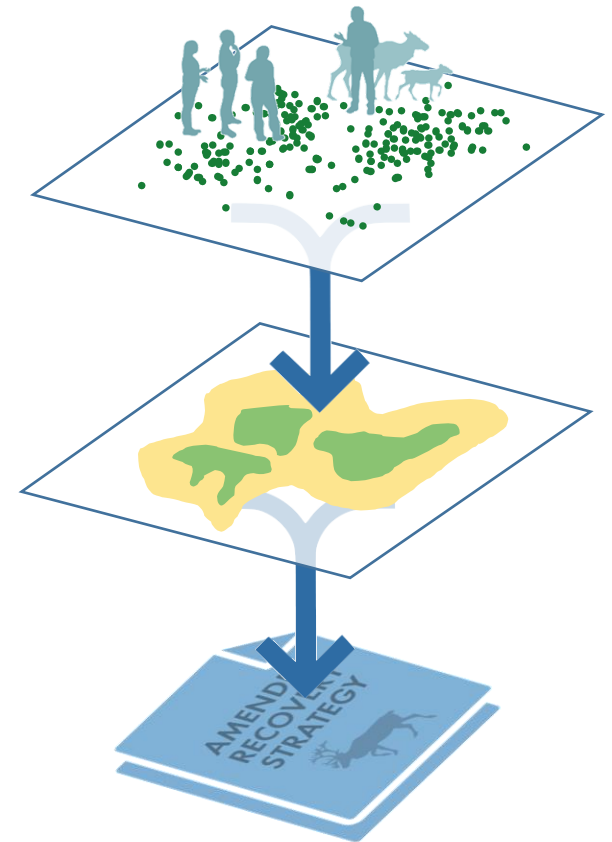


Goals and Outline



Goals:

- Introduce 3 landscape categories of critical habitat
- Enable feedback on maps
- Enable feedback on text of preliminary draft Recovery Strategy (Section 8) and concepts





Goals and Outline



Outline:

- What we've heard
- Caribou needs as a landscape species
- Draft idea: 3 landscape categories
 - How they are mapped to meet caribou needs
 - How they differ
- Draft critical habitat identification
- Draft critical habitat management
- Introduce the hands-on activity





What We Have Heard



SUMMARY

This section outlines what habitat is identified as critical habitat for southern mountain caribou, with an explanation and rationale, and examples of activities likely to destroy critical habitat.

Critical habitat identification, protection, and management are key elements of southern mountain caribou recovery.

SECTION 8: CRITICAL HABITAT

WHAT WE HAVE HEARD

- Federal maps should align with provincial maps.
- A need for federal critical habitat to be clearly delineated on detailed maps.
- The dynamic nature of caribou habitat over time is a major challenge to producing static maps.
- A desire to see local population unit boundaries expanded so they contain enough habitat for future caribou populations that are fully recovered.
- Disturbance thresholds should reflect habitat conditions necessary to restore Section 35 and/or Treaty Rights to have meaningful relationships with caribou.
- Disturbance thresholds should account for the quality of habitat, not just percent disturbance.
- 65% undisturbed habitat is not enough for caribou in some areas.
- Concerns about the lack of Indigenous representation in the study on boreal caribou that led to recommendations of more than 65% undisturbed habitat.
- The importance of protecting migration corridors and low elevation habitat.
- Interest in sharing locations of historic migration corridors.
- Requests for critical habitat mapping to consider climate refugia, and locations of future caribou habitat under climate change.
- The need for reduced confusion around definitions, e.g. "habitat", "disturbed/undisturbed", "population".
- A need to consider many different habitat conditions that can impact caribou:
 - Migration corridors
 - Mineral licks
 - Medicinal plant locations
 - Calving and rutting grounds
 - Predator and alternate prey densities
 - Mountain pine beetle-affected areas
 - Helicopters, Heli-skiing, and recreation
 - Historical distributions

8



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 - Historical distributions

8



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What We Have Heard



old forests cumulative effects diminished untouched
 limited connection land collaboration predators
 vulnerable mountain elevation wildfire
 barren growth interconnected critical
 sacred vast habitat at-risk
 access lichen connectivity tourism
 low space old linear disturbance foresters
 corridors tree heliskiing management expansive
 vanishing new-blood-imported necessary
 high elevation forest fragmented
 impacted tools licenses remote
 alpine harsh territory natural
 urgency endangered undisturbed
 reduced grasslands

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 - Historical distributions

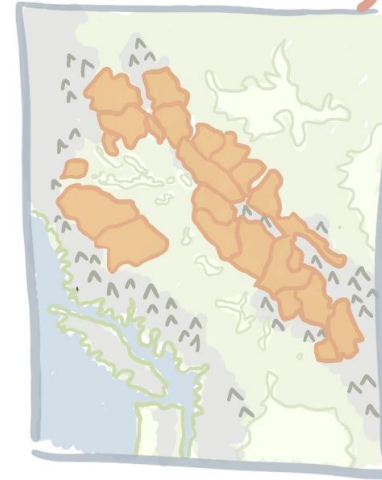
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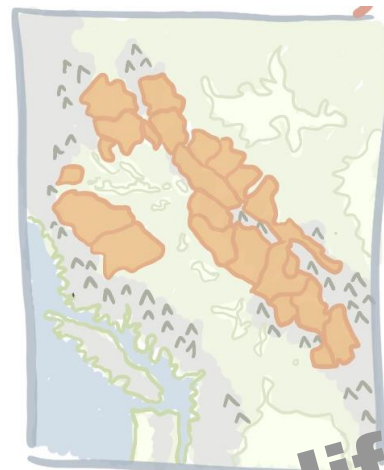
What We Have Heard



old forests cumulative effects diminished untouched
 limited connection collaboration predators
 alpine harsh barren growth interconnected critical
 territory licenses impacted access sacred vast at-risk
 natural remote tools low lichen connectivity urgency
 corridors tree heliskiing space old linear disturbance
 vanishing new-blood-imported management expansive
 high elevation forest fragmented necessary
 endangered undisturbed reduced grasslands
 tourism wolf farm foresters



What We Have Heard



Simplification

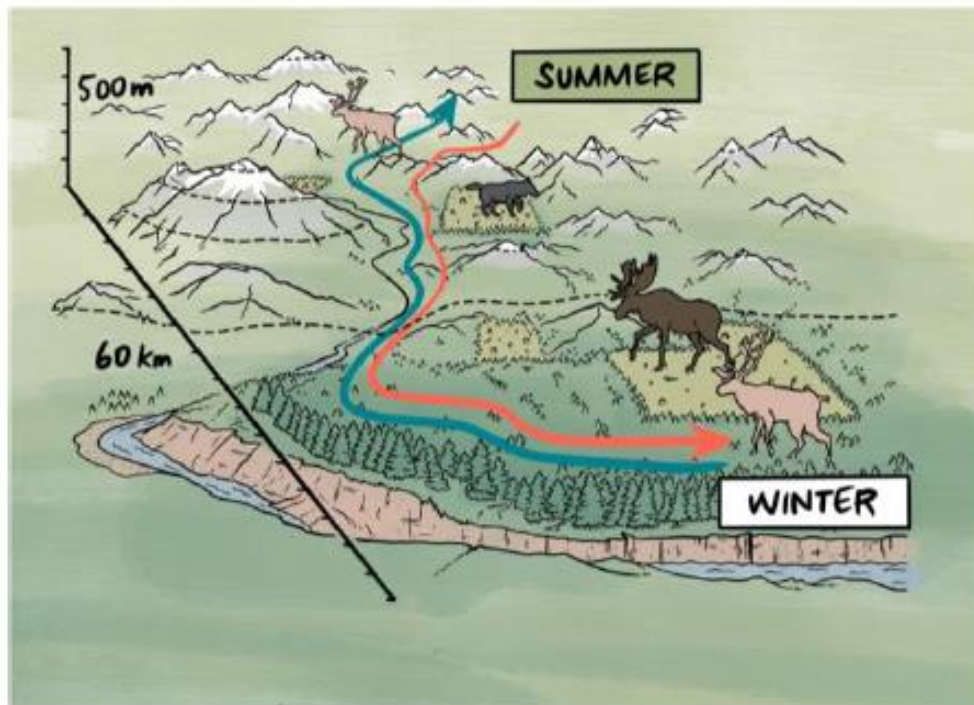


old forests cumulative effects diminished untouched
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lichen connectivity tourism
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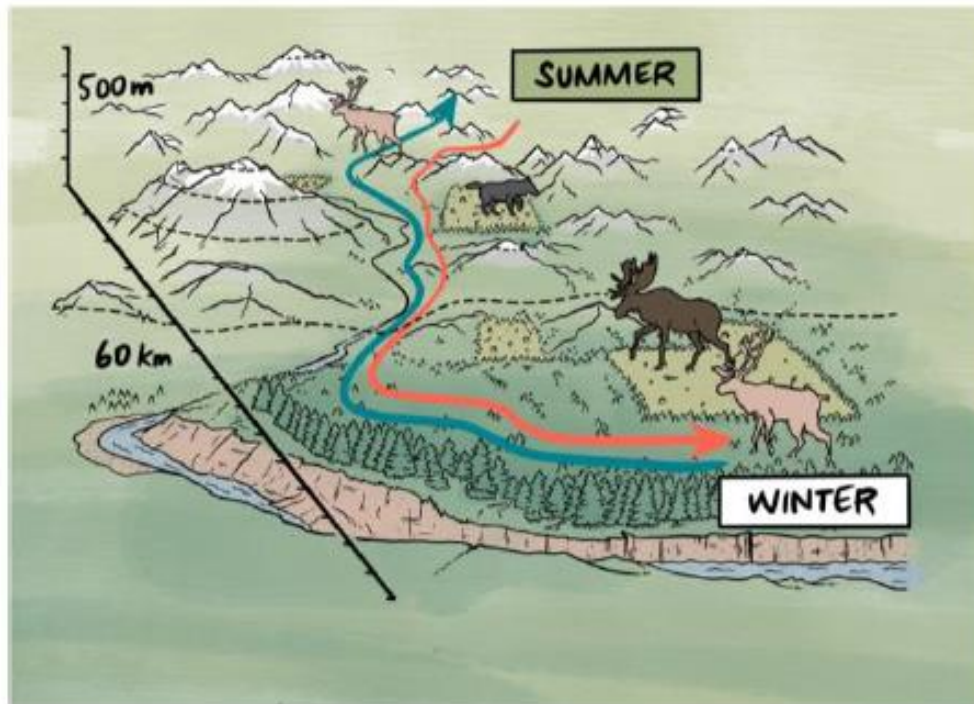


Caribou are a Landscape Species





Caribou are a Landscape Species



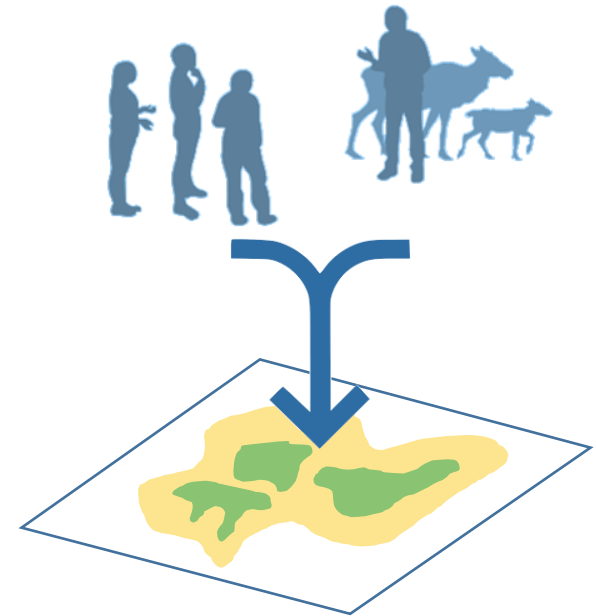
Caribou need:

- Undisturbed habitat (comprised of large contiguous areas)
- Low predation
- Older forest stands
- High-elevation (sub)alpine
- Ability to migrate (including intact forest at low elevations)



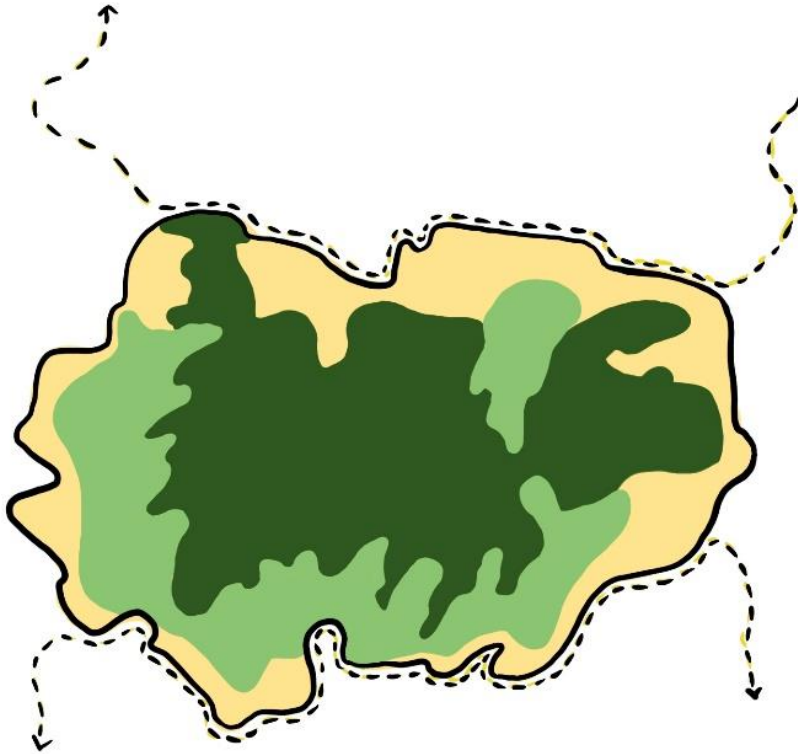
What is Critical Habitat Identification?

- Represents habitat that caribou need to meet the recovery objective → *abundant enough to support meaningful relationships with Indigenous peoples*
- Is independent of human constraints or economic considerations
- Informs considerations for provincial regulations and actions by Indigenous groups and others, that could influence land-use activities to enable survival and recovery





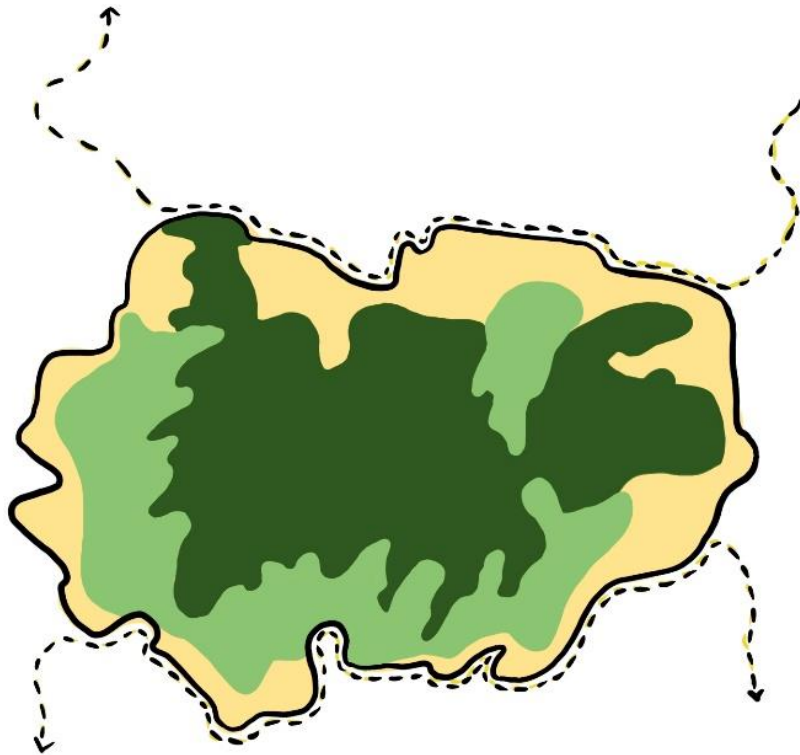
How to Map these Diverse Needs: Draft Landscape Categories



←-----→ Caribou Recovery Units



How to Map these Diverse Needs: Draft Landscape Categories

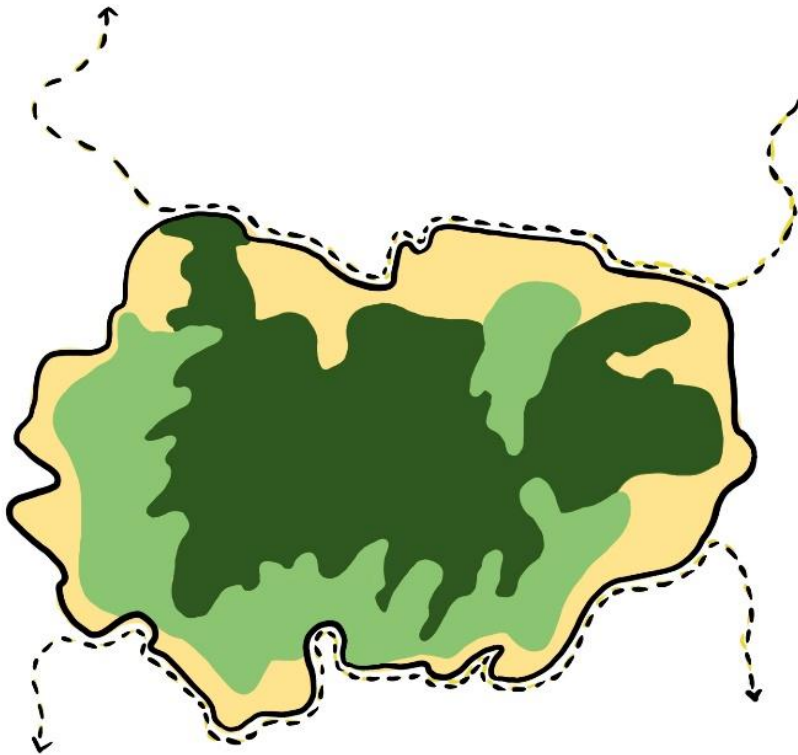


←-----→ Caribou Recovery Units

- Category A
- Category B
- Matrix



How to Map these Diverse Needs: Draft Landscape Categories



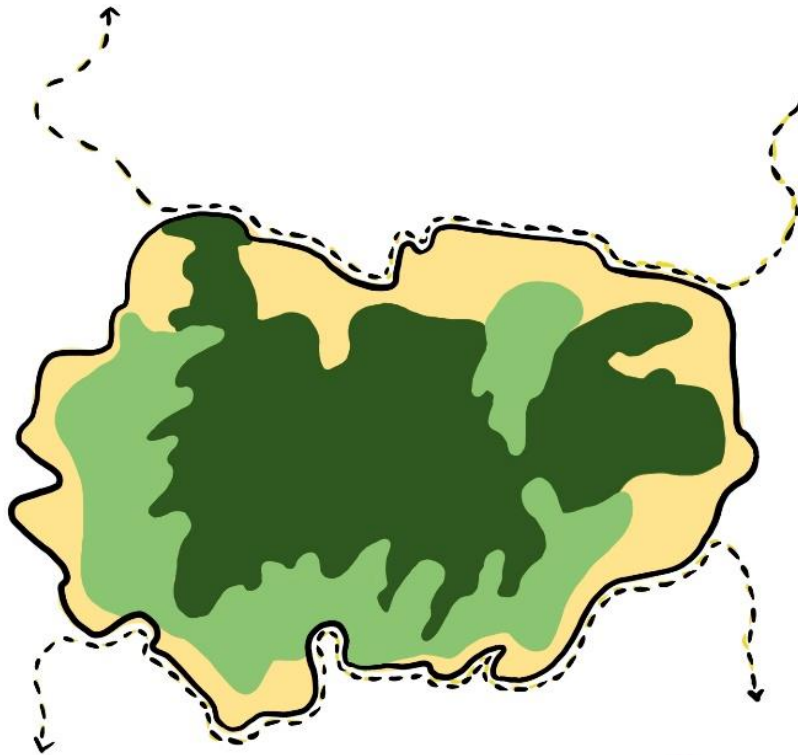
←---→ Caribou Recovery Units

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[NOTE: all concepts and text are draft, including names of categories, suggestions are welcome]



How to Map these Diverse Needs: Draft Landscape Categories

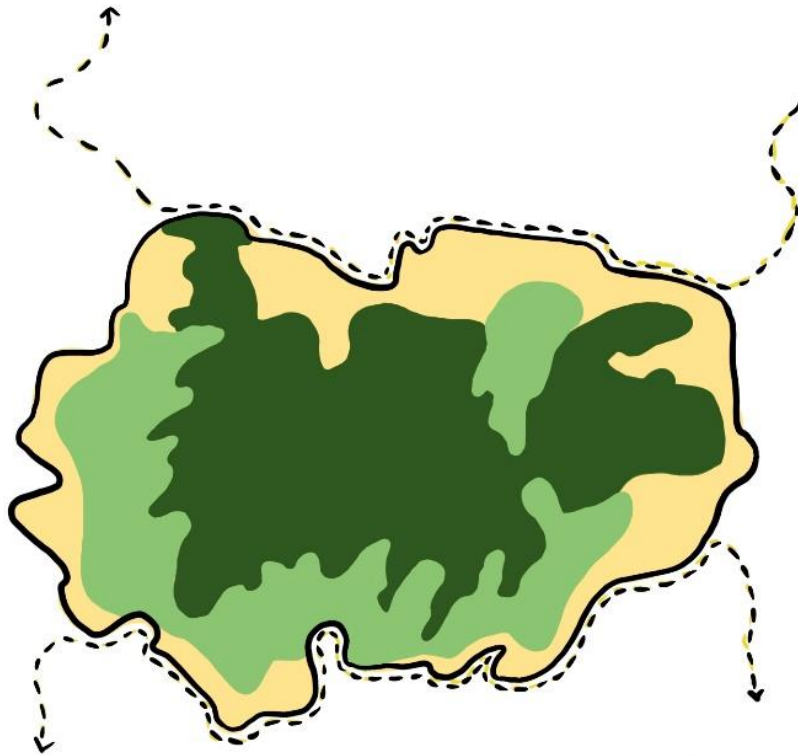


● Category A
● Category B
● Matrix

	Descriptions (8.1)
A	High and low elevation areas needed for ongoing persistence of caribou + high elevation areas needed for recovery
B	
Mx	



How to Map these Diverse Needs: Draft Landscape Categories

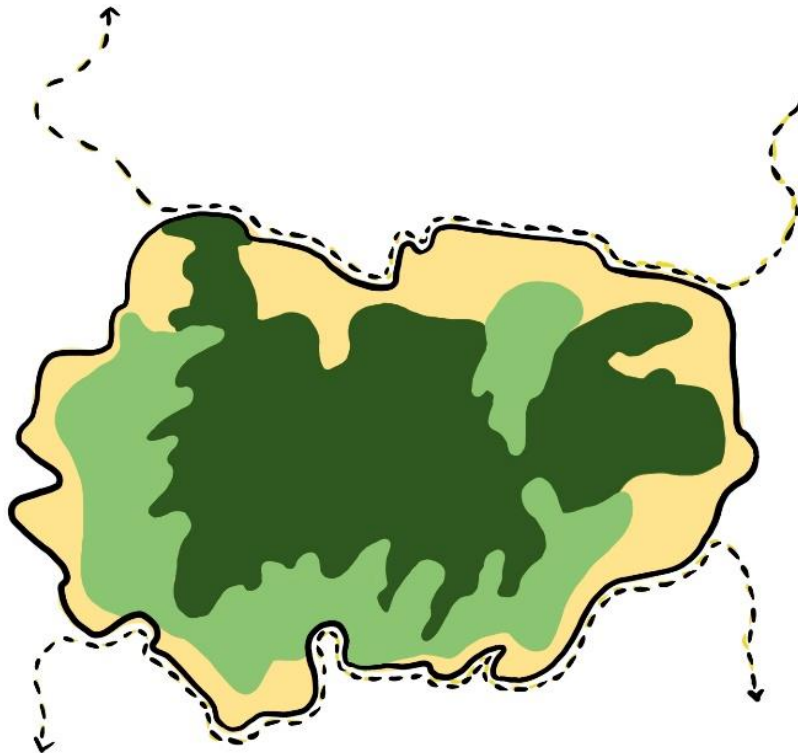


● Category A
 ● Category B
 ● Matrix

	Descriptions (8.1)
A	High and low elevation areas needed for ongoing persistence of caribou + high elevation areas needed for recovery
B	Low elevation areas needed to support caribou as populations recover
Mx	



How to Map these Diverse Needs: Draft Landscape Categories



● Category A
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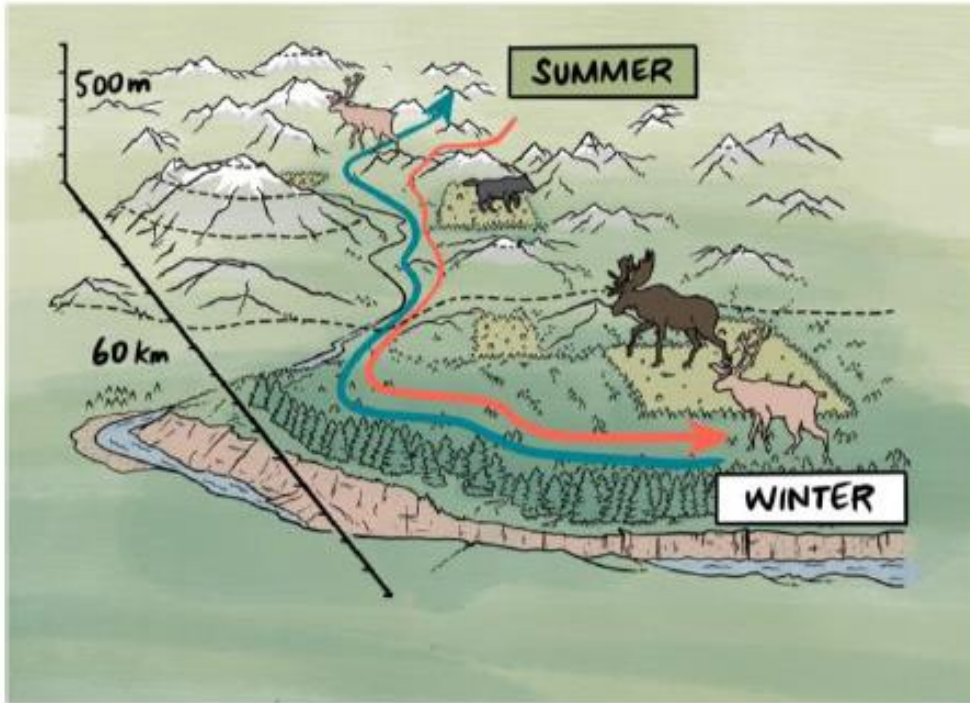
	Descriptions (8.1)
A	High and low elevation areas needed for ongoing persistence of caribou + high elevation areas needed for recovery
B	Low elevation areas needed to support caribou as populations recover
Mx	Adjacent areas that have little-to-no use by caribou, but support predators and other ungulates



How the 3 Categories Relate to the Needs of Caribou



Caribou Need:



- Undisturbed habitat (comprised of large contiguous areas)
- Low predation
- Older forest stands
- High-elevation (sub)alpine
- Ability to migrate (including intact forest at low-elevations)

Caribou Need

Undisturbed Habitat and Low Predation

Disturbance



Old Growth



Caribou Need

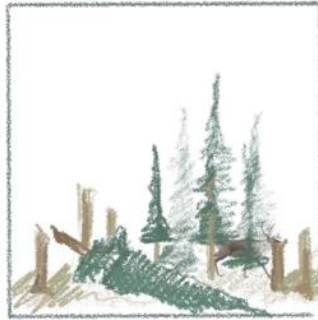
Undisturbed Habitat and Low Predation



Disturbance



Old Growth



Disturbance

Caribou Need

Undisturbed Habitat and Low Predation



Disturbance



Caribou Need

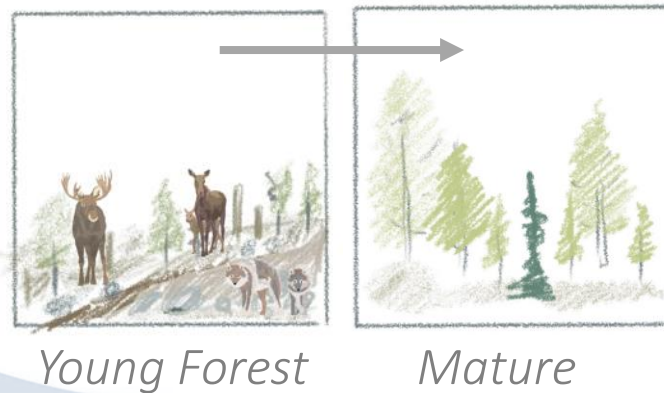
Undisturbed Habitat and Low Predation



Disturbance

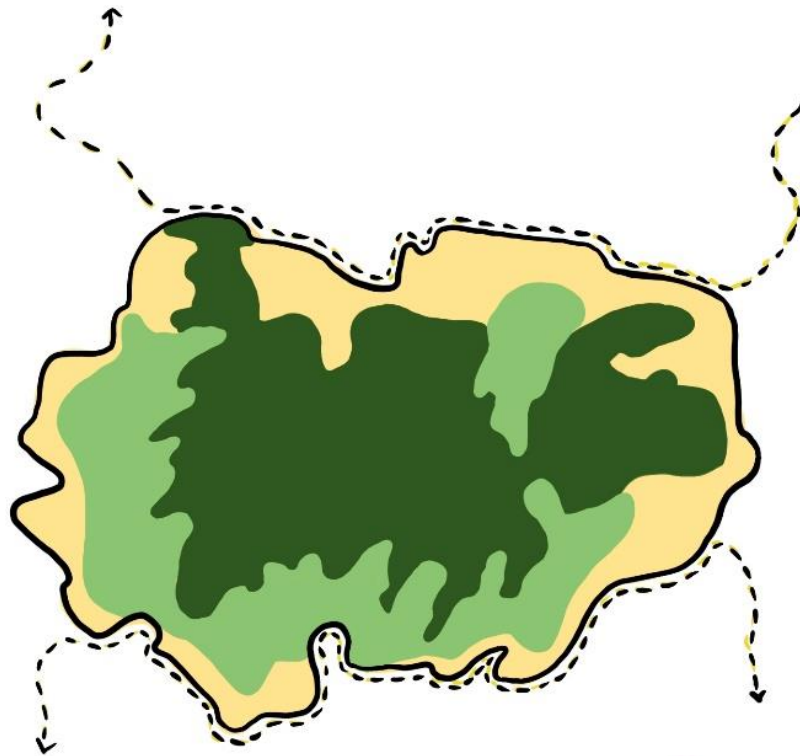


Natural regeneration and active restoration



Caribou Need

Undisturbed Habitat and Low Predation



● Category A
● Category B
● Matrix

Manage disturbance

- Prevent ongoing disturbance
- Allow for natural regeneration and active restoration



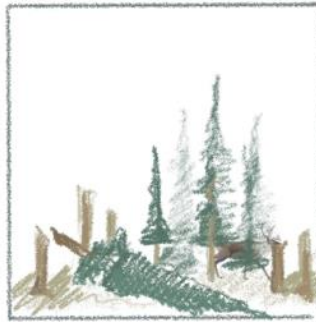
Caribou Need

Older Forest Stands

Disturbance



Old Growth



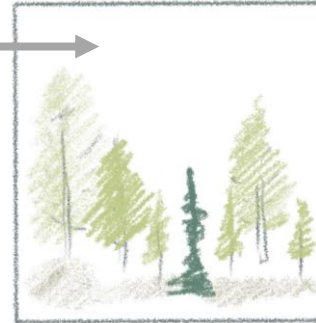
Disturbance



Natural regeneration and active restoration



Young Forest



Mature



A

B

Caribou Need

Older Forest Stands



Disturbance



Old Growth



Disturbance



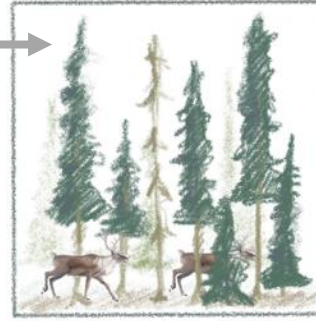
Natural regeneration and active restoration



Young Forest



Mature



Old Growth



A

B

Caribou Need

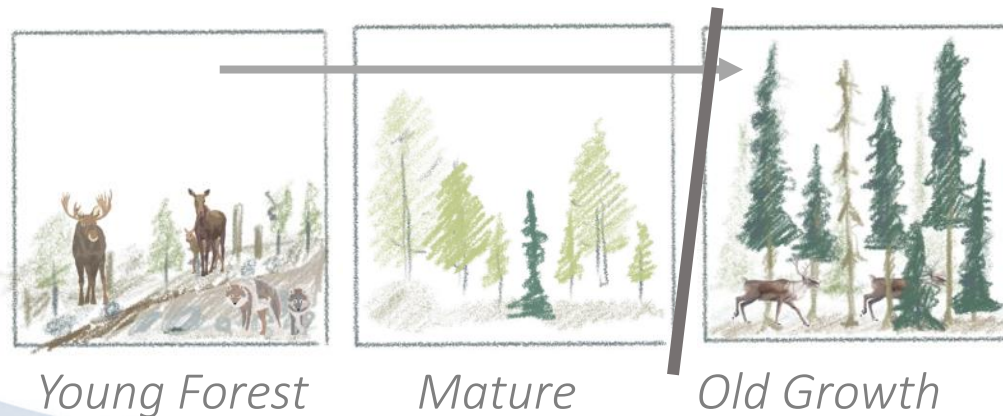
Older Forest Stands



Disturbance



Natural regeneration and active restoration



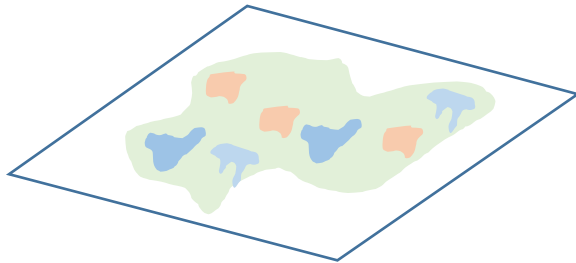
A

B

What age do forest stands need to be for caribou use?

Caribou Need

Older Forest Stands



Forest Stand Type
<i>Deciduous-leading</i>
Aspen / Black Spruce
Poplar / Black Spruce
<i>Coniferous-leading</i>
Black Spruce / Aspen
Black Spruce / Poplar
Black Spruce / Birch
Fir / Aspen
Fir / Poplar
Fir / Birch
<i>Coniferous</i>
Pure White Spruce
Pure Englemann Spruce
White Spruce leading with Pine
Englemann leading with Pine
White Spruce leading, no Pine
Englemann leading, no Pine
Pure Pine
Pine leading with White Spruce
Pine leading with Black Spruce
Pine leading with Fir
Pine leading, no Spruce and Fir
Pure Black Spruce
Black Spruce leading with Pine
Black Spruce leading, no Pine
Larch leading
Pure Balsam Fir
Balsam Fir leading with Pine
Balsam Fir leading, no Pine

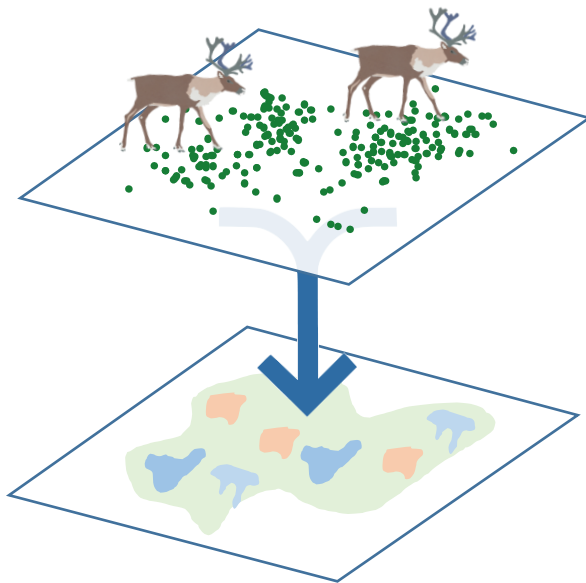


A

B

Caribou Need

Older Forest Stands



Forest Stand Type
<i>Deciduous-leading</i>
Aspen / Black Spruce
Poplar / Black Spruce
<i>Coniferous-leading</i>
Black Spruce / Aspen
Black Spruce / Poplar
Black Spruce / Birch
Fir / Aspen
Fir / Poplar
Fir / Birch
<i>Coniferous</i>
Pure White Spruce
Pure Englemann Spruce
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Englemann leading, no Pine
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Black Spruce leading, no Pine
Larch leading
Pure Balsam Fir
Balsam Fir leading with Pine
Balsam Fir leading, no Pine

A

B

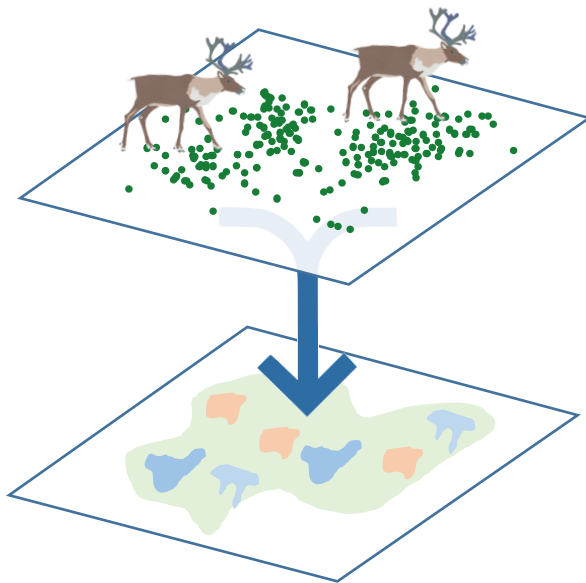
Caribou Need

Older Forest Stands



Table 8.x

Forest Stand Type	Min. Age
<i>Deciduous-leading</i>	(years)
Aspen / Black Spruce	60-80
Poplar / Black Spruce	80
<i>Coniferous-leading</i>	
Black Spruce / Aspen	80-120
Black Spruce / Poplar	80
Black Spruce / Birch	80
Fir / Aspen	80
Fir / Poplar	80
Fir / Birch	80
<i>Coniferous</i>	
Pure White Spruce	80
Pure Englemann Spruce	80-250
White Spruce leading with Pine	80-100
Englemann leading with Pine	120-140
White Spruce leading, no Pine	80
Englemann leading, no Pine	140-250
Pure Pine	80-120
Pine leading with White Spruce	80-250
Pine leading with Black Spruce	80-120
Pine leading with Fir	80-140
Pine leading, no Spruce and Fir	80
Pure Black Spruce	80-140
Black Spruce leading with Pine	80-140
Black Spruce leading, no Pine	80
Larch leading	80
Pure Balsam Fir	80-120
Balsam Fir leading with Pine	80-100
Balsam Fir leading, no Pine	80-250



A

B

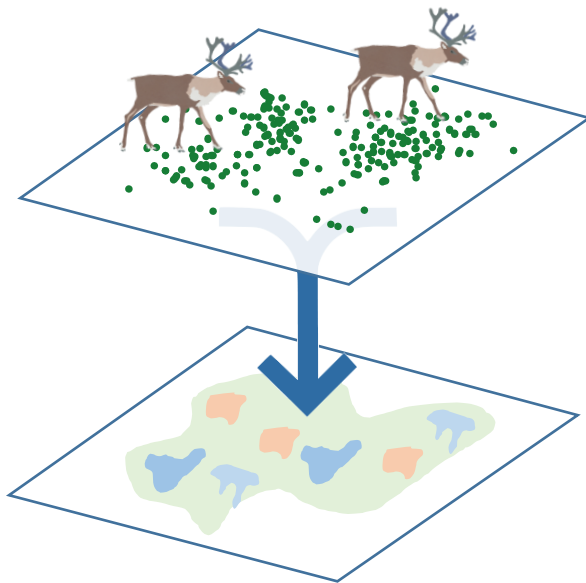
Caribou Need

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Fir / Aspen	80
Fir / Poplar	80
Fir / Birch	80
<i>Coniferous</i>	
Pure White Spruce	80
Pure Englemann Spruce	80-250
White Spruce leading with Pine	80-100
Englemann leading with Pine	120-140
White Spruce leading, no Pine	80
Englemann leading, no Pine	140-250
Pure Pine	80-120
Pine leading with White Spruce	80-250
Pine leading with Black Spruce	80-120
Pine leading with Fir	80-140
Pine leading, no Spruce and Fir	80
Pure Black Spruce	80-140
Black Spruce leading with Pine	80-140
Black Spruce leading, no Pine	80
Larch leading	80
Pure Balsam Fir	80-120
Balsam Fir leading with Pine	80-100
Balsam Fir leading, no Pine	80-250

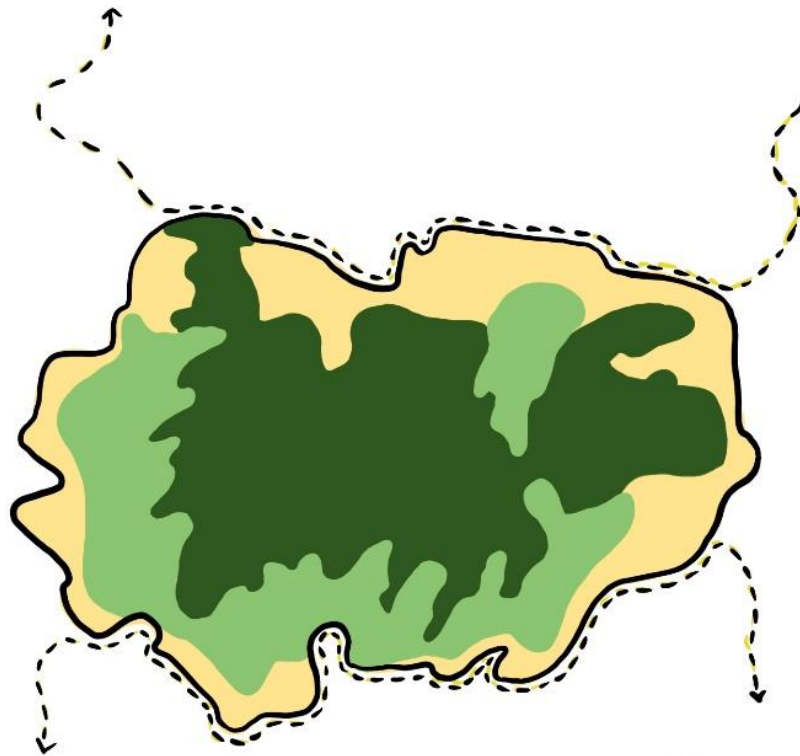


A

B

Caribou Need

High Elevation Alpine and Subalpine

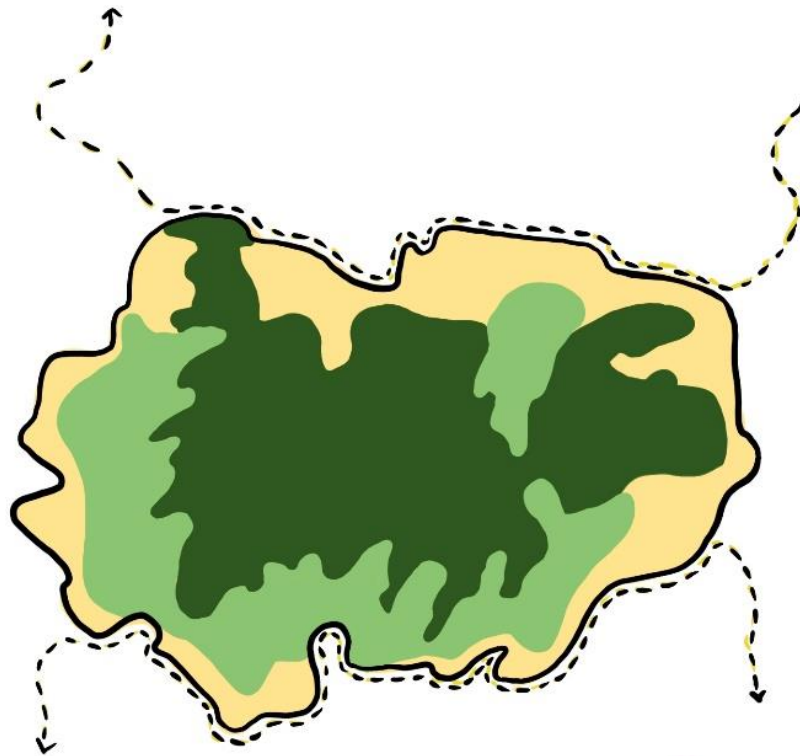


- Category A
- Category B
- Matrix

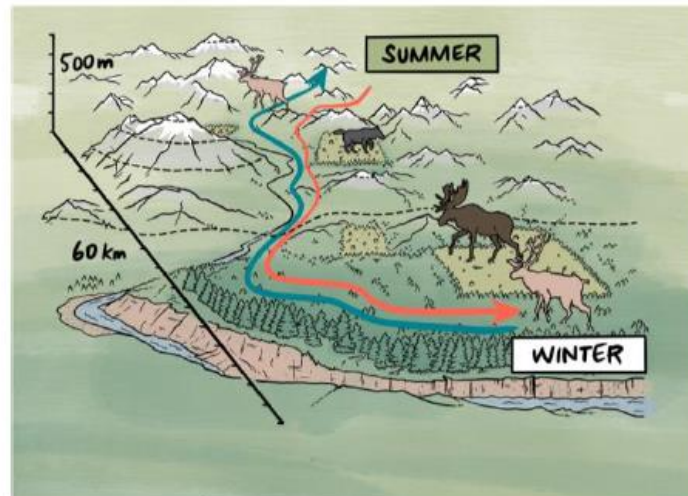


Caribou Need

Ability to Migrate
to low elevations



● Category A
● Category B
● Matrix

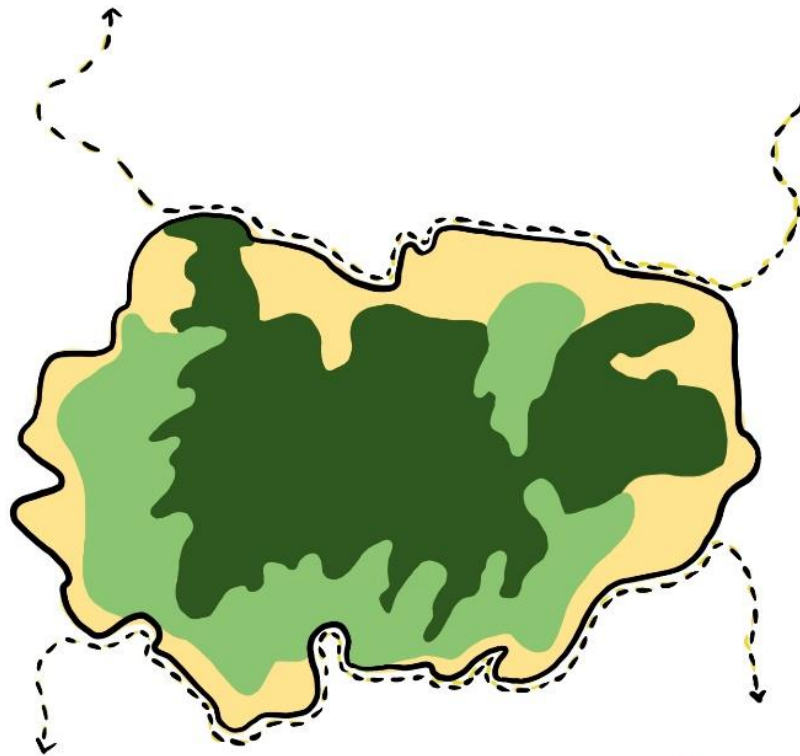


* more intact forest at
low elevations

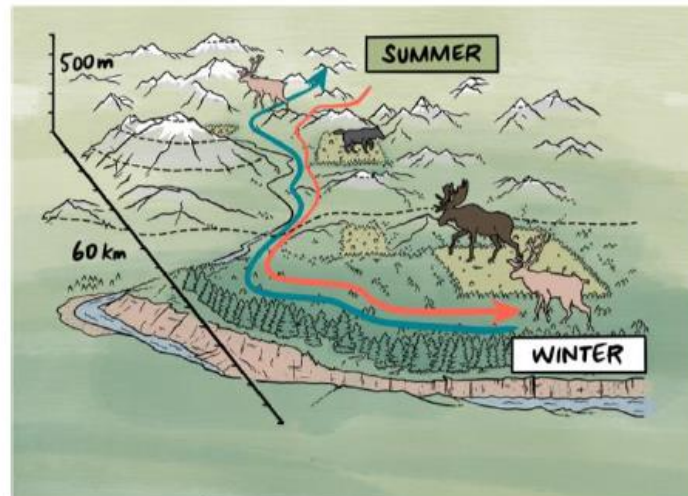


Caribou Need

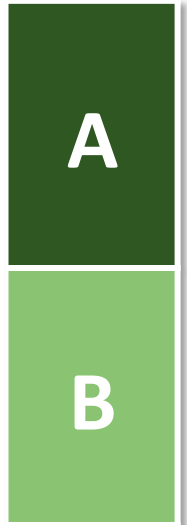
Increased ability to migrate
as populations recover



● Category A
● Category B
● Matrix

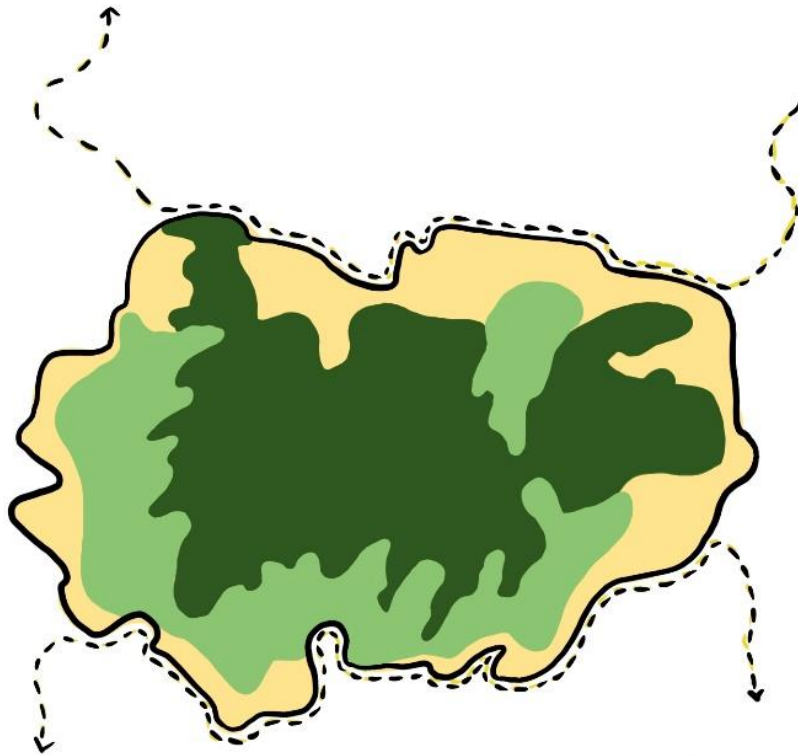


* more intact forest at
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How the 3 Categories Relate to the Needs of Caribou

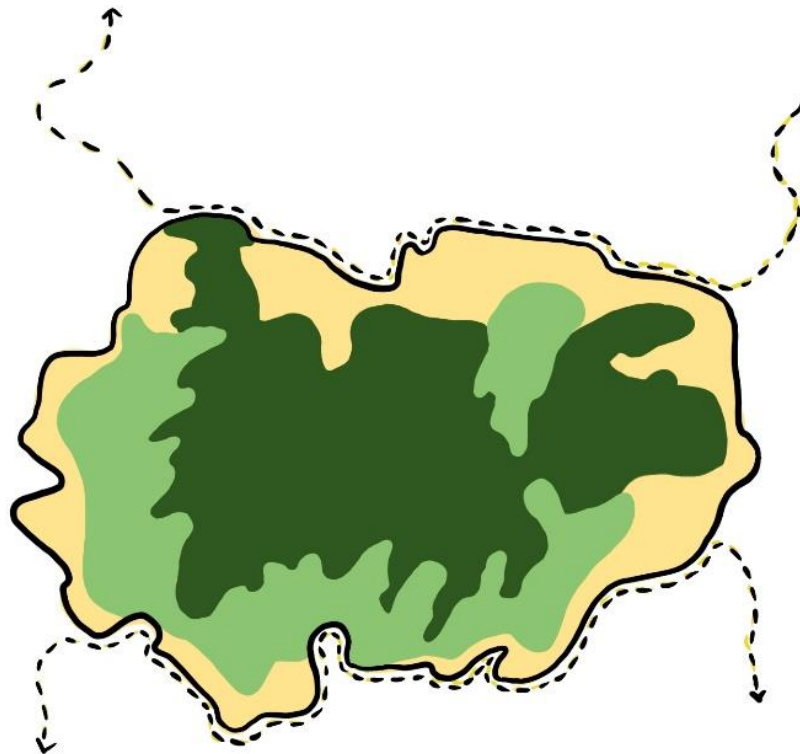


● Category A
 ● Category B
 ● Matrix

	Needs of Caribou
A	<ul style="list-style-type: none"> • High elevation (sub)alpine • Ability to migrate (more intact forest at low elevation) • Older forest stands • Low predation
B	<ul style="list-style-type: none"> • Ability to migrate (more intact forest at low elevation) as populations grow • Older forest stands • Low predation
Mx	<ul style="list-style-type: none"> • Low predation



Critical Habitat Identification within the 3 Categories



● Category A
 ● Category B
 ● Matrix

	Critical Habitat is Identified As:
A	<u>the entire area</u> of the landscape category except permanent alterations, AND
B	areas that currently, or over time, would contribute to <u>at least 65% undisturbed habitat and maximize the amount of older forest</u> , AND
Mx	areas that currently, or over time, would contribute to <u>at least 65% mid-seral or older forest</u>



Suggested Management of Critical Habitat for Survival and Recovery



	Critical Habitat identification	Management* (recommendations)
A	<u>the entire area</u> of the landscape category except permanent alterations, AND	<ul style="list-style-type: none">• No further anthropogenic disturbance• Allow natural regeneration or actively restore to 95-100% undisturbed habitat, AND
B	areas that currently or over time would contribute to <u>at least 65% undisturbed habitat and maximize amount of older forest</u> , AND	
Mx	areas that currently or over time would contribute to <u>at least 65% mid-seral or older habitat</u>	

*Manage sensory disturbance, throughout (8.4)



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B	areas that currently or over time would contribute to <u>at least 65% undisturbed habitat and maximize amount of older forest</u> , AND	<ul style="list-style-type: none"> No further anthropogenic disturbance of habitat containing older forest types Regen/restore to 65-100% undisturbed Maximize older forest types (Table 8.x) AND
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*Manage sensory disturbance, throughout (8.4)

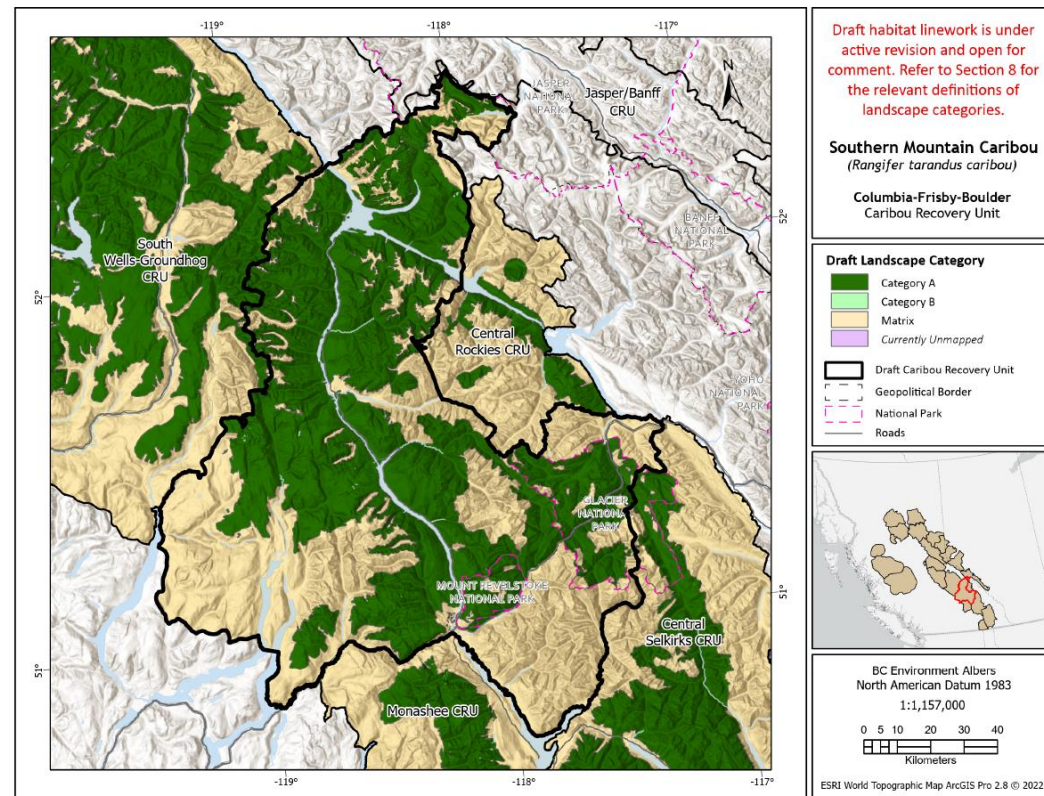


We Welcome Feedback on:

During the workshop or after the workshop



- Maps
 - Around the room
 - Appendix C in Binder
 - Appendix C in Digital
- 3 Landscape Categories
- Text in Draft Recovery Strategy
- Needs of Caribou



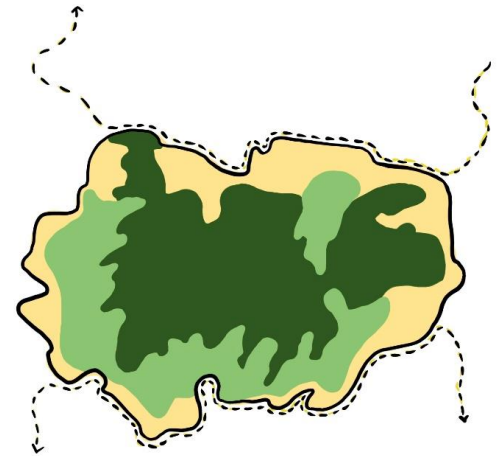


Small Group Breakouts



Critical Habitat Identification

- Represents habitat that caribou need to meet the recovery objective → *abundant enough to support meaningful relationships with Indigenous peoples*
- Is independent of human constraints or economic considerations
- Informs considerations for provincial regulations and actions by Indigenous groups and others, could influence land-use activities to enable survival and recovery



Thank you!



Artwork by:

Jean Polfus



Aaron Russell



@ConfDood



Rashpal Dhillon