



Parks  
Canada

Parcs  
Canada

Canada



National Program for Ecological Corridors in Canada  
Appalachian Trail Landscape Partnership Annual Meeting - 1<sup>st</sup> November 2023



# Overview

Criteria for Recognizing Ecological Corridors

Mapping Priority Areas for Ecological Corridors

Funding on the Ground Work

Inspiring Action







## Background and Context

- Historic investment in 2021 budget of \$2.3 billion over 5 years towards Canada's Enhanced Nature Legacy, including funding for the National Program for Ecological Corridors.
- Ecological corridors are part of a suite of nature-based solutions to fight climate change & halt and reverse biodiversity loss.
- The program will strengthen the network of protected and conserved areas through tools, resources and support to enable and catalyze on-the-ground corridor initiatives.
- Contributes to several Goals and Targets under the Kunming-Montreal Global Biodiversity Framework and Canada's National Adaptation Strategy.
- Parks Canada will not own or administer corridors but will collaborate with partners to advance shared objectives.





# Weaving Indigenous Perspectives

Relationship-building and engagement have taken place and are ongoing at a high level, including with:

- National and regional Indigenous organizations and governments
- Indigenous-led conservation networks
- Local Indigenous-led corridor initiatives

The National Program for Ecological Corridors supports Indigenous leadership and stewardship by:

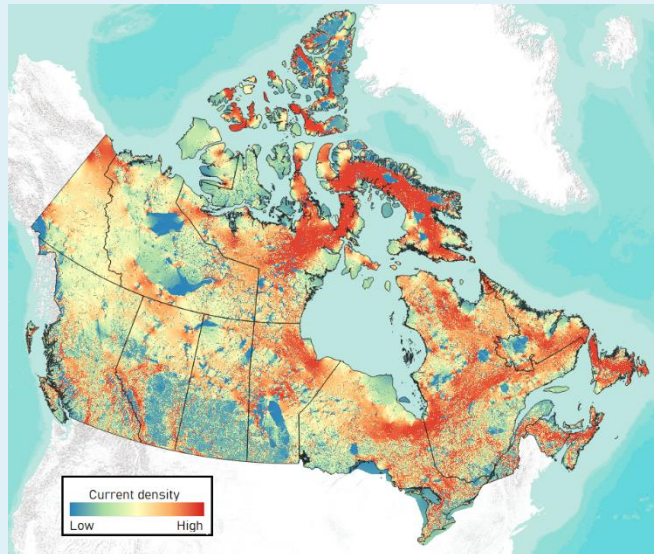
- Recognizing Indigenous stewardship values as a priority goal of corridor recognition
- Developing a funding stream for Indigenous-led projects
- Supporting an Indigenous-led pilot project





# Adopted Definitions

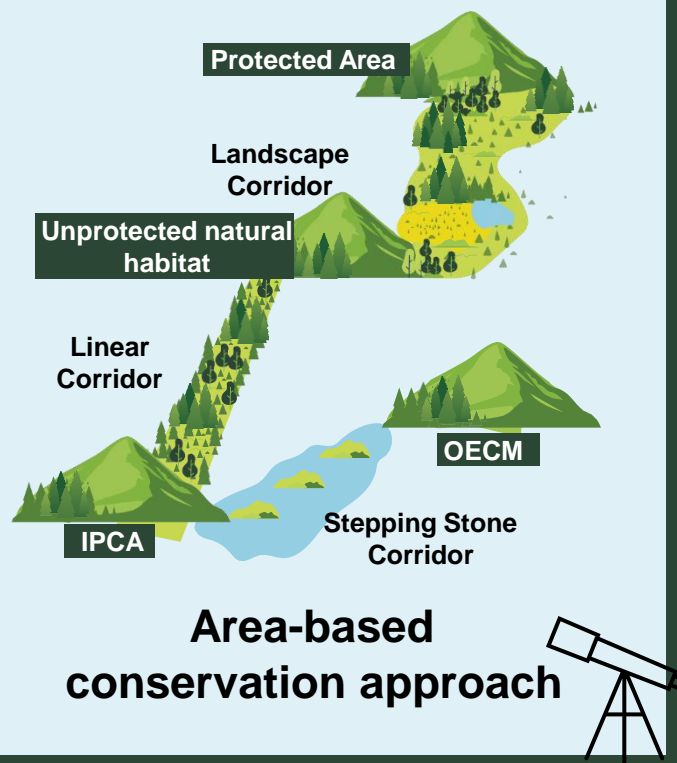
## ECOLOGICAL CONNECTIVITY



Relative measure of the “probability of movement”

\*Source: Pither R, O'Brien P, Brennan A, Hirsh-Pearson K, Bowman J. (2023) Predicting areas important for ecological connectivity throughout Canada. PLoS ONE 18(2): e0281980. <https://doi.org/10.1371/journal.pone.0281980>

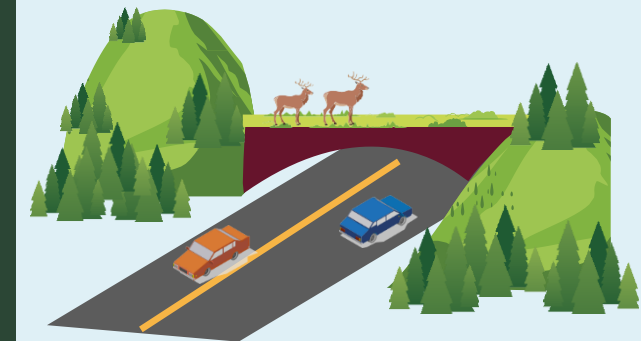
## ECOLOGICAL CORRIDOR



Area-based conservation approach

*Program focus*

## WILDLIFE CROSSING



Management action





## Criteria for Recognizing Ecological Corridors



Parks Canada will recognize 3-6 ecological corridors by Dec 2025

- ❑ Parks Canada's role is to develop a user-friendly framework to encourage and support effective corridor creation and management by partners.
- ❑ To be recognized, a corridor must meet the national criteria for an ecological corridor, which reflect key aspects of the definition:

***“A clearly defined geographical space that is governed and managed over the long term to maintain or restore effective ecological connectivity while honouring and sustaining Indigenous stewardship values”***

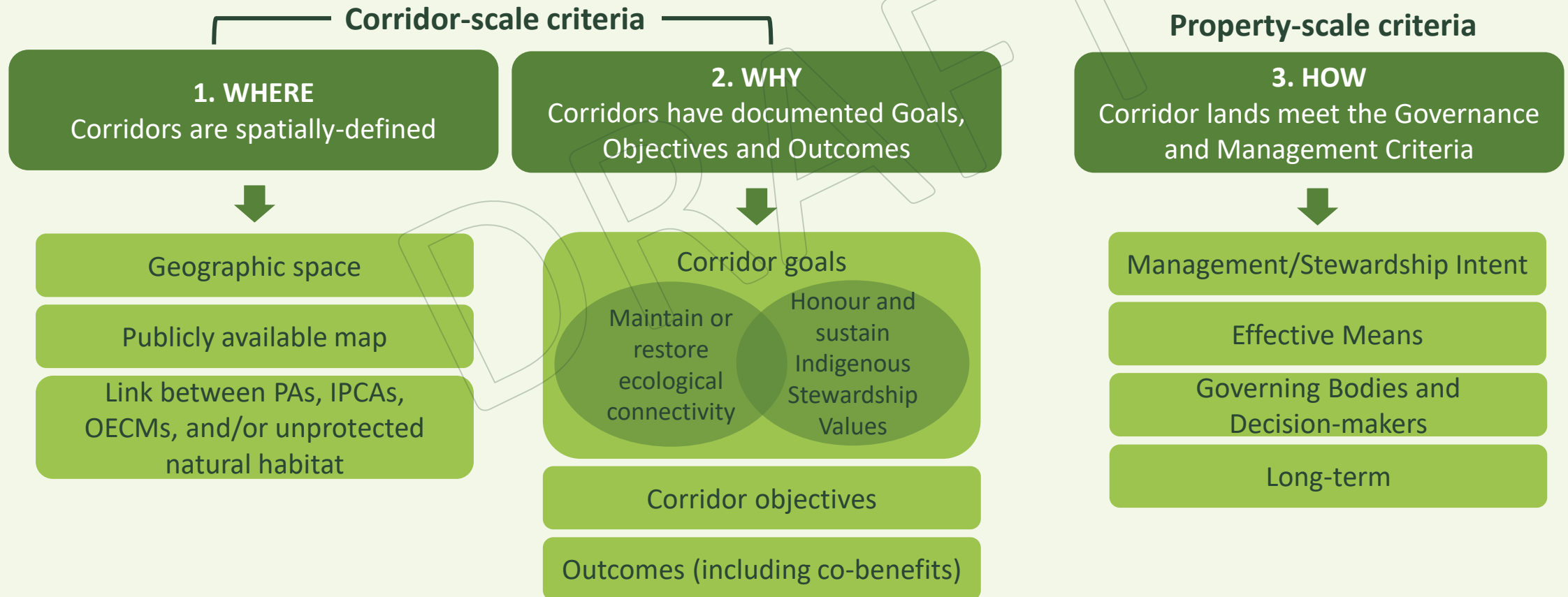
**(adapted from IUCN 2020)**

# DRAFT Criteria for Ecological Corridors in Canada

## Definition and Purpose of Ecological Corridors

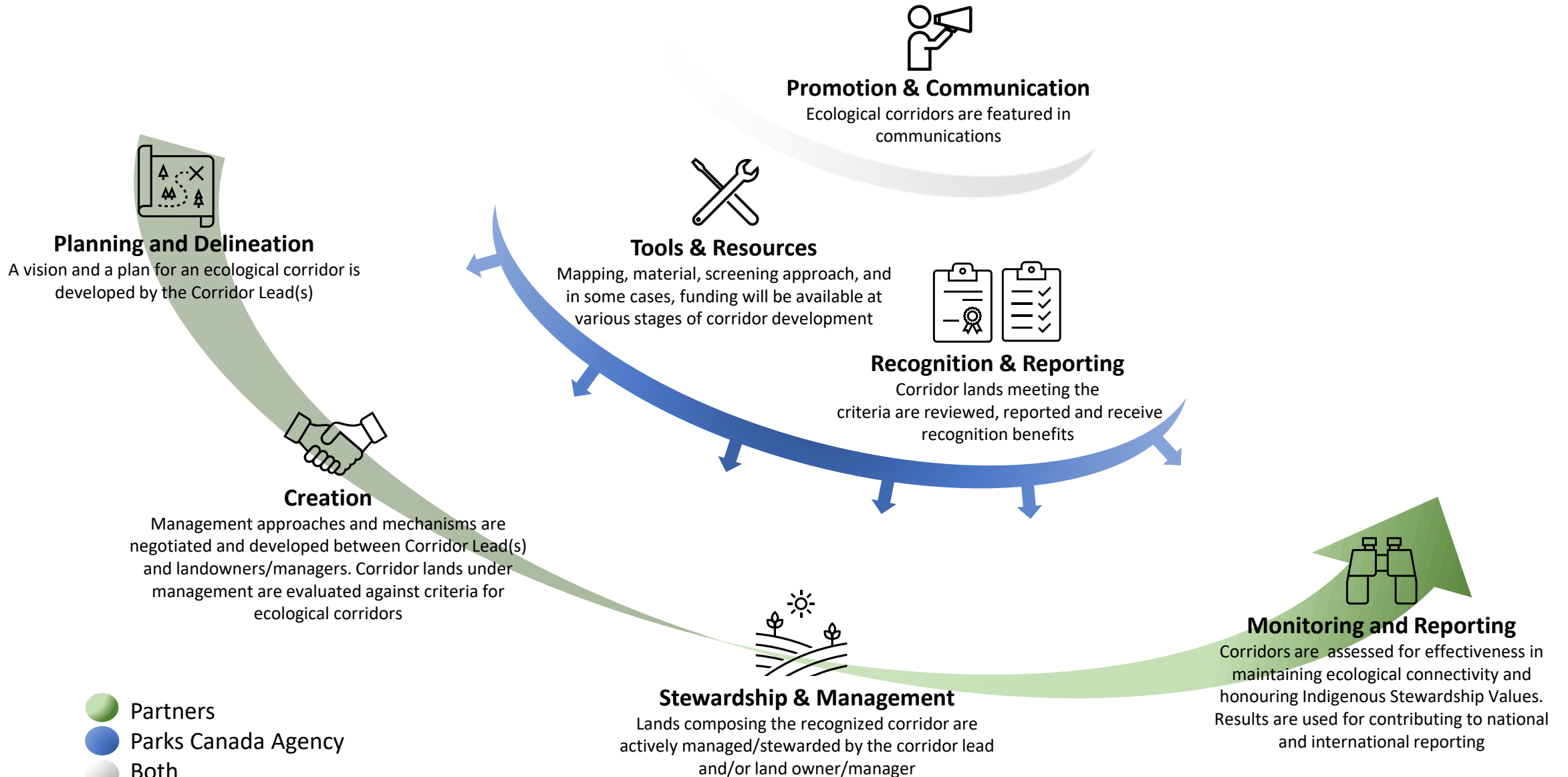
**Definition:** “A clearly defined geographical space that is governed and managed over the long term to maintain or restore effective ecological connectivity while honouring and sustaining Indigenous stewardship values”  
(modified from IUCN, 2020)

**Purpose:** to facilitate ecological connectivity between protected and conserved areas and unprotected natural habitat. Ecological corridors are not be a substitute for Protected Areas (PAs), Indigenous Protected and Conserved areas (IPCAs) or Other effective area-based conservation measures (OECMs), but rather complement them to form ecological networks for conservation.





# Draft Conceptual Model for Corridor Recognition







## Mapping Priority Areas for Ecological Corridors



Parks Canada will identify and map **National Priority Areas for Corridors** in the southern and mid-latitudes of Canada.

- ❑ Develop and publish a map of *National Priority Areas for Corridors* and supporting methodology based on national-scale spatial data, connectivity modelling and expert advice (with support from Environment and Climate Change Canada).
- ❑ Engage with provinces, experts, partners and Indigenous communities to refine priority areas and identify specific ecological corridors within priority areas to advance as projects.
- ❑ Periodically review and update the maps of priority areas as new data becomes available and climate and/or ecological conditions change.



# Methods for Mapping Priority Areas for Corridors



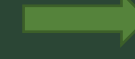
Create  
Prioritization  
Framework



Compile & Analyze  
National-Scale Data



Identify and Map National  
Priority Areas for Corridors

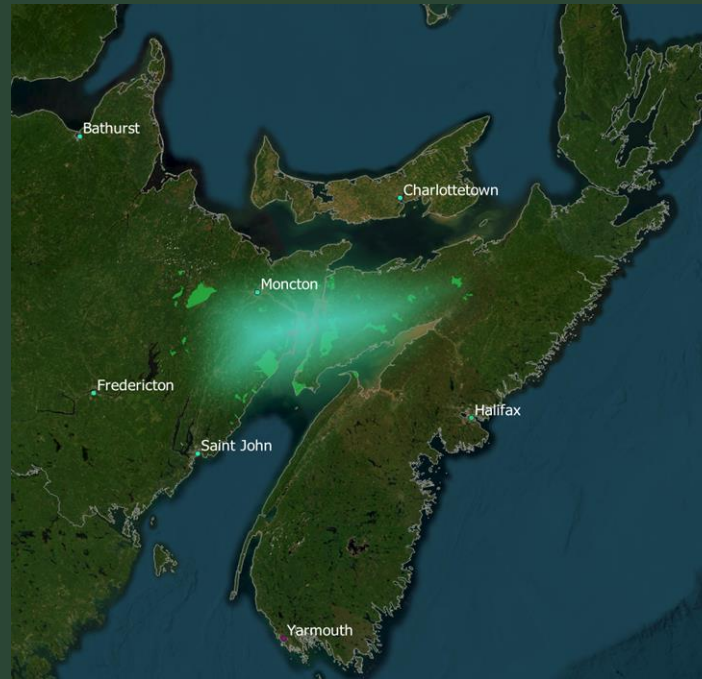
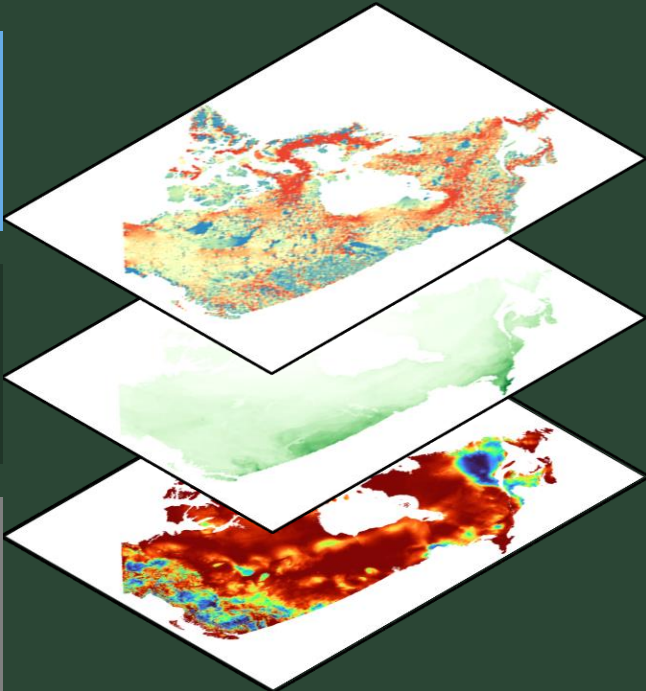


Work with Local Partners to Identify  
Ecological Corridors in Priority Areas

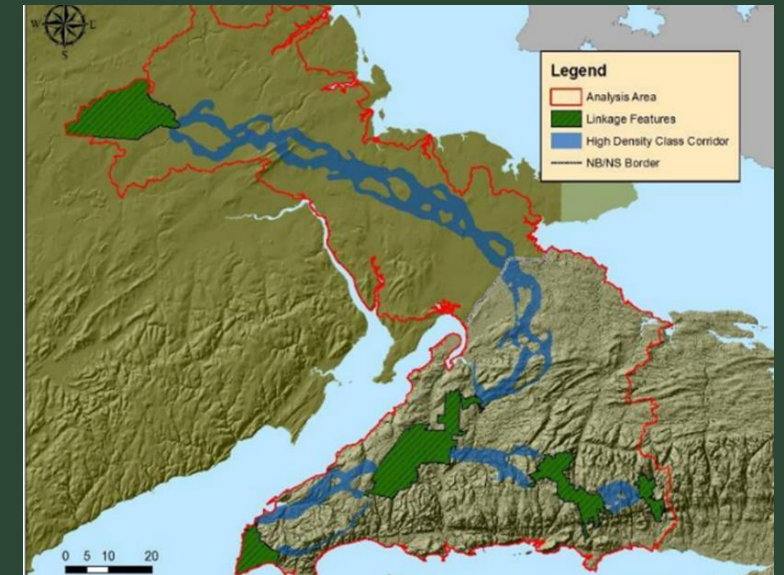
Geographic

Ecological

Threats



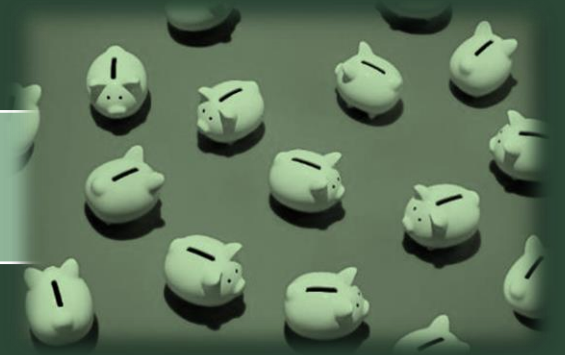
Chignecto Isthmus National Priority Area  
for Corridors



Nussey, P. A Wildlife Connectivity Analysis for the  
Chignecto Isthmus Region: Final Report to the Habitat  
Conservation Fund. 2016.



## Funding On the Ground Work



- ✓ To date, seven pilot-projects & two studies supported partners to undertake:
  - Private lands restoration
  - Land securement
  - Indigenous-led corridor planning
  - Wildlife collision mitigation
  
- ✓ Additional projects will be supported from now until 2026
  - Funding will support projects in national priority areas for corridors and Indigenous-led projects for:
    - Corridor planning and delineation, creation and stewardship, management and monitoring, etc.



# Funded Pilot Projects



1. Indigenous-led West Coast Stewardship Corridor (British Columbia)

2. Radium Wildlife Overpass (British Columbia)

3. Highway 3 Wildlife Mitigation Project (British Columbia and Alberta)

4. Cootes to Escarpment EcoPark System Ecological Corridor (Ontario)

5. Hundred Acres Wood (Quebec)

6. Ecological connectivity around La Mauricie (Quebec)

7. Consolidation of the Forillon Ecological Corridor (Quebec)







## Inspiring Action



Develop new and leverage existing communication tools to inspire action in support of ecological corridors

### 1. **Communicate Program – Parks Canada website**

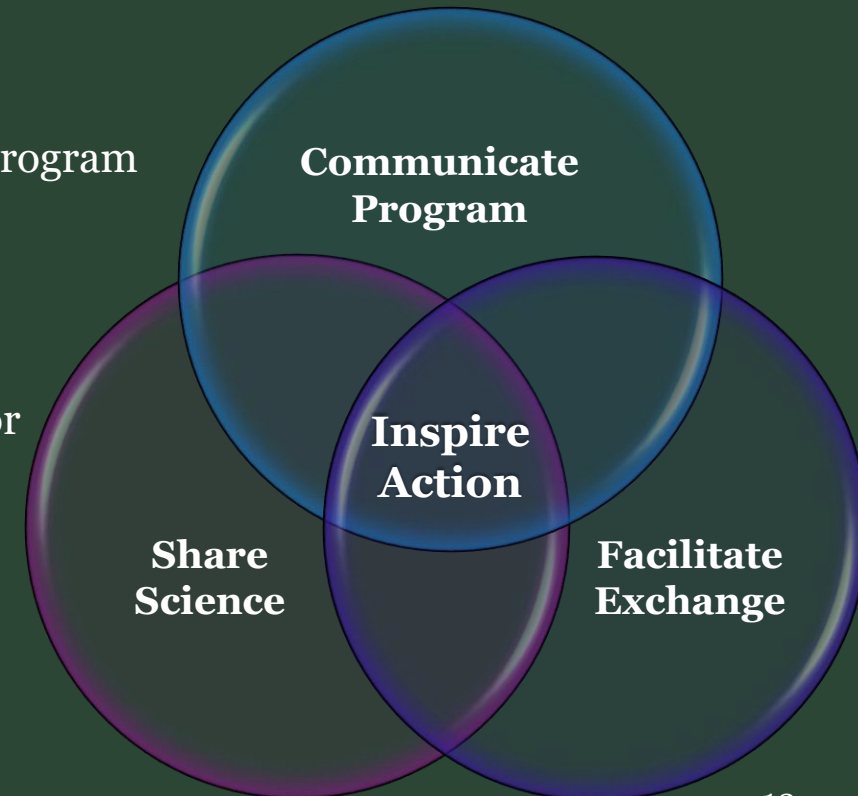
- Map of national priority areas for corridors, and information on key program elements (criteria, recognition) for conservation practitioners, other governments, the general public

### 2. **Share Science – Open Data Portals**

- National priority areas for corridors, data layers and model outputs for analysis and manipulation by other academics and technical users

### 3. **Facilitate Exchange – Geospatial Online Platform**

- Story map of projects, resources/tools and knowledge available on a user friendly, interactive site that facilitates exchanges among land managers, ENGOs, private landowners and other stewards





# Next steps

## **Short-term (Summer-Fall 2023)**

- ✓ Finalize criteria

## **Medium-term (Winter 2023/24)**

- ✓ Refine and publicly release methods and map of national priority areas for ecological corridors (terrestrial)
- ✓ Confirm approach for on-the-ground funding

## **Long-term (2024-25)**

- ✓ Work with partners to share maps, tools, data, knowledge and stories about ecological corridors to catalyze and inspire action
- ✓ Recognize 3-6 ecological corridors







# Program Contact

Christine Drake

Manager, Ecological Corridors and Heritage Rivers

[Christine.Drake@pc.gc.ca](mailto:Christine.Drake@pc.gc.ca)





**CRITERION**

**INTENDED EFFECT**

**DESCRIPTION**

Criteria are a standard by which we can work collaboratively and effectively to advance ecological connectivity in Canada. This table describes the standards that should be met, or worked towards, in order for an area to meet the criteria for ecological corridors.

**Where and Why (Corridor-scale criteria)**

<p><b>Geographic Space</b> Corridors are delineated on publicly available maps and build networks for conservation</p>	<p>The corridor is delineated such that it links protected and conserved areas, or unprotected natural habitat, and guides the implementation of measures in support of corridor goals and objectives</p>	<ul style="list-style-type: none"> <li>Ensuring the aspiring corridor is spatially delineated and the mapping publicly available supports the implementation of conservation measures, accounting and reporting, identifying relevant governing bodies and decision-makers, enhancing transparency, and raising public awareness of the corridor.</li> </ul>
<p><b>Goals, Objectives and Outcomes</b> Corridor goals and objectives are documented</p>	<p>Ecological connectivity is maintained or restored, and Indigenous Stewardship Values are honoured and sustained, where applicable</p>	<ul style="list-style-type: none"> <li>Clearly documented goals and objectives provide a roadmap and facilitate collaborative action for the achievement of corridor outcomes, while also providing a basis for future evaluation and monitoring.</li> </ul>

**How (Property-scale criteria)**

<p><b>Management/ Stewardship Intent</b> The management approach is described and documented.</p>	<p>Management/stewardship intent is compatible with corridor goals and objectives.</p>	<ul style="list-style-type: none"> <li>The management/stewardship intent of the mechanism associated with the property does not have to be strictly aligned with the corridor goals and objectives; however, it must not be in conflict. For example, a property managed/stewarded to conserve cultural practices and values of Indigenous Peoples may achieve corridor goals and objectives.</li> </ul>
<p><b>Effective Means</b> Mechanisms are in place and provide the ability to prevent, control or manage/steward what occurs within the corridor.</p>	<p>Only activities that are compatible with the corridor goals and objectives occur and are effectively managed/stewarded.</p>	<ul style="list-style-type: none"> <li>Means must exist to enable decision-makers to prevent incompatible activities and manage/steward activities compatible with the corridor goals and objectives. Examples of legal means include Indigenous law, legislation, policy instruments and contracts. Other effective means includes non-legal tools such voluntary agreements, incentive programs, negotiation and influence, and recognized traditional rules.</li> </ul>
<p><b>Governing bodies &amp; Decision-makers</b> Decision-makers apply the mechanisms and act in a manner that is compatible with the corridor goals and objectives.</p>	<p>Governing bodies and decision-makers do not jeopardize the achievement of corridor goals and objectives.</p>	<ul style="list-style-type: none"> <li>Having effective means is not enough to ensure that only compatible activities occur. Governing bodies and decision-makers must be able to apply them.</li> <li>All relevant governing bodies and decision-makers must be identified, and where they exist, track records of success or failure of decision-makers in using mechanisms should be considered.</li> </ul>
<p><b>Long Term</b> Long-term mechanisms are in place and in effect year-round.</p>	<p>Corridor goals and objectives are maintained year-round and over the long term.</p>	<ul style="list-style-type: none"> <li>Mechanisms do not need to be permanent but should be intended to persist over the medium to long-term. Measures that only provide protection during a specific seasonal timeframe do not, on their own, achieve corridor goals and objectives.</li> </ul>





# Data Used, Sources and Intended Use

<b>Data</b>	<b>Publicly Available (Y/N)</b>	<b>Source</b>	<b>Intended Platform and Use</b>
<b>Omnidirectional connectivity (Pither 2021)</b>	Y	PLOS one (publisher website)	PCA website, External Platform
<b>Park-to-park connectivity (Brennan)</b>	N – P2P Y - International	Science (publisher website – intl. map)	None/proprietary to author
<b>Key Biodiversity Areas</b>	Y	KBA Canada website	Link to source
<b>Important Bird Areas</b>	Y	IBA Canada website	Link to source
<b>ECCC priority places for SAR</b>	Y	Open gov. website	Link to source
<b>Endemism hotspots</b>	Y?	NCC website	Link to source
<b>Ecozones</b>	Y	Open gov. website	Link to source
<b>Critical habitat for Species at Risk</b>	N?	n.a.	Made by Scott, not published or shared externally?
<b>SAR range density</b>	N?	n.a.	Made by Scott, not published or shared externally?
<b>Human footprint</b>	Y	Borealisdata.ca – a data sharing platform	Link to source
<b>Connectivity climate change analogues</b>	Y	Adaptwest.databasin.org	Link to source
<b>Protected and Conserved areas data base</b>	Y	Open gov. website	Link to source
<b>biosphere reserves</b>	Y	Open gov. or UNESCO website	Link to source
<b>“3 conditions” framework data</b>	Y	National Science Review (publisher website)	Link to source
<b>NPAfC shape files</b>	N	Ecological Corridor Team/Parks Canada	PCA website, External Platform, and Open Science and Data Platform